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Annual Meeting
Medical Society of Virginia
Old Point Comfort,
October 9-12, 1949

April, 1949

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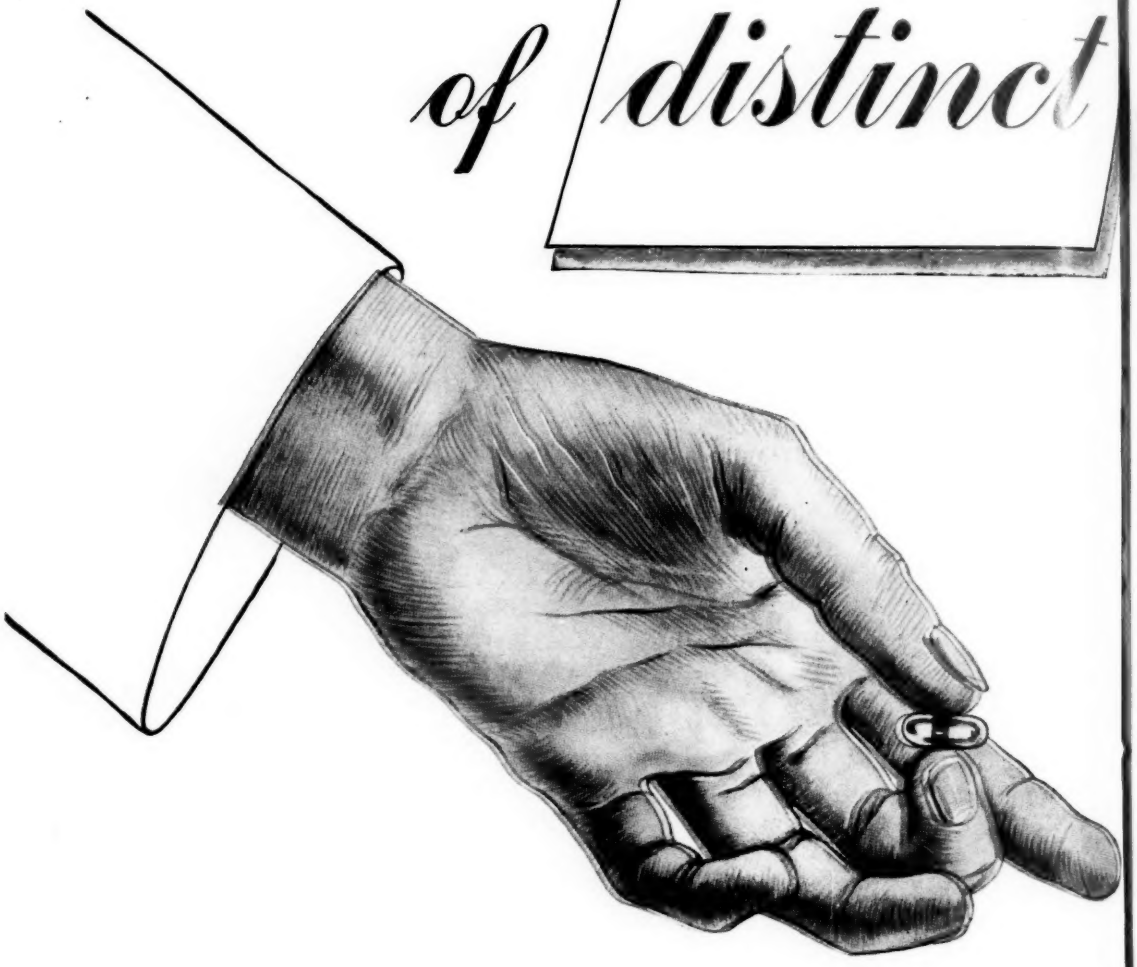

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*Magladery, J.: Therapeutic Conference, The Treatment of Epilepsy. Bull. Johns Hopkins Hosp., 82:609, (June) 1948.

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GUEST EDITORIAL

Politics and Medicine

AS facing the powerful drive of elements in our national life pressing for compulsory federal control of medical matters, the medical profession is in a bad position. The administration's politicians know the vote-getting value of appeals to a public already conditioned to government assistance in many forms. The labor leaders know they will secure their own position by working for the so-called free medical care for their followers. If we are to combat successfully such forces, we must clarify our own thinking, develop a generally acceptable constructive program, and then agree, in spite of minor differences over details, to unite wholeheartedly behind the movement that we believe is necessary to save medicine from disaster.

To many thoughtful doctors, the most serious implication in the drive for compulsory federal control of medicine is the further impetus it would give toward changing our form of government to Stateism, with its subjection of the life of the citizen to an all-powerful controlling political structure. It is to be hoped resistance to such tendencies will still find support from millions of Americans. But it is not to be forgotten that recent experience has shown that for other millions an expected personal benefit outweighs many theoretical objections of political philosophy.

It would seem wise to argue our case on the basis that we can offer a scheme of things that will give the general public better actual medical care than they would get under the proposed federal compulsory plans. Can we propose such a concrete plan? I believe we can.

Here in Maryland there is now in operation a system that was developed at the suggestion and largely through the efforts of the State Medical Society. In brief, it provides full medical service for the indigent and the medically indigent, by the doctor of their own choice, and pays the doctor from state welfare funds. There are of course adequate protective and administrative details that need not be discussed here. Suffice it to say that the plan has been operating in the Maryland counties for two or three years to the general satisfaction, and that a parallel plan is now beginning to operate in Baltimore City. The great advantages of this plan are that it keeps the whole transaction local—the choice of doctor, the care of patients, the certification by the Welfare Department and so on. Furthermore, its operation so far has been financially sound and there is little or no evidence of efforts at abuse of the plan. Finally it covers the needs of a segment of the population not even contemplated in the present proposed federal plans, in spite of their vaunted value to the poor and needy.

The next step is the adoption in every state of some form of voluntary prepayment sickness insurance that will adequately protect, as far as that is possible, the low income groups against the financial consequences of serious illness. It is not necessary, or even desirable, that these plans should be identical in all the states. It is necessary, if we are to counter effectively the claims of our opponents, that each of these plans should really provide security against the monetary costs of professional

services in serious illnesses, and that the plan should have the support of a substantial majority of the practicing profession.

The proposals herewith offered are not visionary or impractical. They have had actual field trials and are standing up. They would preserve all that is valuable in our present excellent system of medical care, and largely remove the ground for criticism based on financial and distributional factors. They would avoid the serious and unescapable objections to federal compulsory control and would actually do better the things that the proponents of federal compulsory control claim for their system.

Finally, the need of medical education for better financial support is real and urgent.

Again, this is not a field that should be surrendered to the national government. There are two basic objections to such a surrender. First, there is no certainty of continuity of such support. No Congress can bind its successor to a continuing financial commitment. With a change of administration, or of political philosophy, with the coming of financial disaster or military stress, it could easily happen that support on which the schools had come to rely was suddenly withdrawn. The effect can be imagined! The second difficulty is that with federal subsidy, inevitably goes federal control. This is a necessary and unavoidable condition. No matter what protective clauses are written into the appropriation acts, or how sincere the assurance of the present administrators of such acts may be, there is no valid protection against serious interference next year, or by the next administration. A single example of how such interference may arise is easily provided. The present administration is committed to the so-called civil rights or anti-discrimination program. This admittedly means that if a system of federal assistance to medical schools is set up, these schools cannot reject qualified students for reasons of color, sex, race or religion. Whether or not one agrees with this idea, there is no escaping the dilemma in which schools in a large section of this country would find themselves. They would either have to do violence to the long established social customs and traditions of their communities or renounce the support they badly needed, and that schools elsewhere were receiving. An even more serious objection is the pressure to admit undue numbers of students, beyond the capacity of the school adequately to care for. Such pressure has already begun to appear with scholarship proposals. It is true that Mr. Ewing says that the civilian approving bodies, such as the Council on Medical Education and Hospitals of the American Medical Association, the Association of American Medical Colleges, etc., could check such tendencies by withholding approval. But, I ask you, what would be the public position of such bodies if they disapproved a school for yielding to the insistence of the government that more doctors are needed, and that the government was putting up the money for them?

Here again is a field that we should not yield to government preemption. In the first place it is our responsibility. We, as a profession, are most closely concerned that medical education should neither be starved nor subsidized. It is my belief that organized medicine should take up this challenge not for one needy school, nor for several, but for all schools on some fair and adequate basis. It is my hope that this will soon be done, and that all of our profession will give full and enthusiastic support to such a movement.

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EDITOR'S NOTE: Dr. Stone is associate professor of surgery at Johns Hopkins University School of Medicine.

AN OUTLINE OF PROPOSED EXPERIMENTS AND OBSERVATIONS FOR THE FURTHER INVESTIGATION OF POLIOMYELITIS

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Richmond, Virginia.

The pressing problem in poliomyelitis is the paralytic feature. If this is viewed in relation to the subject as a whole, it stands out against a background of certain concepts which, though they may not be entirely proven, are quite generally accepted. The virus is very widespread and immunity is very general. Thus the newborn becomes endowed with a temporary immunity, and later exposure to the infectious agent results in subclinical immunization of a large proportion of the population. Also, immunity may be acquired by having clinical poliomyelitis without paralysis, and this is more common than the paralytic form. As a net result, though immune persons may become carriers and exposure is general, relatively few individuals develop paralytic poliomyelitis even under epidemic conditions. At the same time, (to say nothing of the mortality) the vast concern over the paralytic features when they do occur makes it desirable to explore any reasonable inquiry into the pathogenesis of paralysis.

Hypothesis can rarely serve any useful end except as a stimulus to some form of research. That is the hesitant but hopeful purpose here. No investigator would undertake the research unless the idea seemed reasonable and negative results would therefore be of some value. Positive results would be of more value.

In the attack on the unsolved problems of poliomyelitis, for a long time many have regarded the seasonal incidence as a reasonable starting point. The influence of season might be operative in any one or more of several ways. It might be on the virus, on and through a vector including as a vector the human carrier, or on the susceptibility of the host. So long ago as 1931 Aycock said there was evidence to suggest that some discrepancy in physiologic adaptation to climate and season may be a factor in determining clinical poliomyelitis and he has used the phrase "autarceologic resistance" to indicate successful avoidance of such a discrepancy. The following notes** embody an attempt to apply this concept. It would seem that early practical ends would be met by noting in experimental work the time of the year, the extent of exposure to sunlight, and the atmospheric temperature. The secondary questions dealing with temperature and solar radiation as independent variables would be taken up only if positive evidence was obtained of a direct influence of the summer season on the host. In any subsequent consideration of the influence of independent variables, data of the United States Weather Bureau would be available for at least some localities.

Hypothetical Pathogenesis:

Active virus + lack of immunity + a central nervous system conditioned by the climatic and physiological factors tending toward "Heat Disease" results in paralytic poliomyelitis.

The phrase "tending toward 'Heat Disease'" predicates physiological changes short of the pathological conditions in heat prostration, heat exhaustion, heat stroke, and sunstroke.

A. Virus intravenously in monkeys rarely causes infection. "If, however, an aseptic inflammation has been provoked in the meninges by the injection of foreign protein intraspinally, much smaller doses intravenously injected are allowed to pass through into the spinal fluid and cause experimental poliomyelitis." (Amoss, H. L., and Aycock, W. L.: Acute Poliomyelitis, Tice, F.: Practice of Medicine, Vol. 5, page 335; Flexner, S., and Amoss, H. L.: *J. Exper. Med., 25*: 525, 1917).

"Infection by the nasal route is also rendered much easier by similar preparation." (Amoss,H. L., Taylor, H. D., and Witherbee, W. D.: *J. Exper. Med., 29*: 115, 1919). "Normal monkey or horse

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**The marking of paragraphs by letters conforms to a draft of the material which certain students of the subject have been kind enough to criticize in personal communications. The omissions are of points which, though considered to be pertinent, are less immediately so. A rearrangement of the paragraphs might result in a more logical, certainly a more conventional, presentation. But without controlled studies no presentation could be conclusive or convincing, and the sequence used reflects an influence of some of the personal communications referred to above.

serum, isotonic salt solution, and Ringer's and Locke's solutions, when injected into the meninges, promote infection with the virus of poliomyelitis introduced into the blood, the nose or the subcutaneous tissues." (Flexner, S., and Amoss, H. L.: *J. Exper. Med., 25*: 525, 1917).

B. Effects of heat, light, or the heat of light include an irritant effect on the brain and cord.

C. "That, indeed, exposure to intense light is capable of producing a localized hyperthermia of the central nervous organs has been borne out by the investigations of Hill and his co-workers." (Sundstroem, E. S.: The Physiological Effects of Tropical Climate, *Phys. Rev., 7*: 320, 1927).

D. "It has been thought that sunlight impinging directly upon the head may raise the temperature in the meninges and brain, because hemorrhages have been found in these structures after death associated with excessive exposure to sunlight. Aron (*Philippine J. Sc.*, Med. Section, *6*: 101, 1911) in the Philippine Islands . . . found that monkeys fully exposed to bright sunlight succumbed in one to two hours, hemorrhages of the brain being found at autopsy, but that if only the head was exposed the animals survived long periods of insolation. Apparently the total heat load was the lethal factor rather than heating of the cranium." (Blum, Harold F.: Physiological Effects of Sunlight on Man, *Phys. Rev., 25*: 521, July, 1945).

E. ----------

F. In the monkey, as compared with intravenous injection of virus, infection is much more easily produced by other routes, including the nasal route. "Hill (*J. State Med., 39*: 683, 1931; *Quart. J. Exp. Physiol., 23*: 35, 1933) believed he had shown that long infra-red radiation impinging on the skin caused swelling of the mucous membranes of the nose ('nose closing effect') . . . but ample studies have not confirmed these findings. Nose closing appears to result from heating of the skin by any means, including sunlight." (Blum, H. F.: *Phys. Rev., supra cit.*, p. 512; Dufton, A. F., and Bedford, T.: *J. Hyg., 33*: 476, 1933).

Could heat, through the nose closing effect, facilitate infection by the nasal route, or could it increase the number or carrying capacity of carriers?

G. ----------

H. ----------

I. There are pathological changes in the brain and spinal cord in heat stroke . . . and poliomyelitis . . .

J. The seasonal incidence of "Heat Disease" and poliomyelitis is similar.

K. The factor of fatigue enters into the etiology of heat stroke, and, some observers think, in poliomyelitis. (As to exercise and heat stroke, heat exhaustion, and heat prostration, Borden, D. L., *et al.*: Statistical Study of 265 Cases of Heat Disease, *J. A. M. A., 128*: 1200, Aug. 25, 1945). Lumsden, in an analysis of 133 cases of poliomyelitis found "unusual physical stress or mechanical injury within three weeks prior in 21 cases." (Lumsden, L. L.: An Epidemiological Study of Poliomyelitis in Mississippi in 1941, *Pub. Health Rep., 57*: 729, May 15, 1942).

L. The personal characteristics believed to contribute to increased susceptibility to heat stroke and to poliomyelitis are expressed in the following:

Heat stroke: "It has been commonly noted that heat victims tend toward obesity" and the author's observations confirm this in Environment and Fatal Heat Stroke—Analysis of 157 Cases Occurring in the Army in the U. S. during World War II, by Elizabeth Schickele: Environmental Protection Section, Research and Development Branch, Military Planning Division, Office of the Quartermaster General, (*Military Surgeon, 100*: 235, March, 1947).

Poliomyelitis: Amoss and Aycock refer to "the common clinical impression" that these children are "strong and healthy", "fine specimens", i. e., it is they who are of the type lacking "autarcesiological resistance." (Tice, Vol. 5, page 343). "Certainly it has long been noted that the victims of poliomyelitis are commonly well-nourished, big children." Rather than that preceding illness, poor health, poor nutrition increase susceptibility, "the evidence would point to an opposite effect." (Wilson, J. L.: Oxford Medicine, Vol. 5, p. 124 (14)).

M. . . . As compared with the age incidence of infantile paralysis, the victims of heat exhaustion at Fort Eustis showed a larger percentage contributed by the younger troops: 53% 18-21; 25% 22-30; 22% over 30, but the age groups of the soldier population of the camp were not given. (*J. A. M. A., 128*: 1200, Aug. 25, 1945, *supra cit.*).

N. Personal characteristics: In Mississippi

Lumsden (*supra cit.*) found in 93 cases:

General health: Good, 63; fair, 18; poor, 12.

Body structure: Thin or poor, 19; marked over-development, 2; normal, 72.

Physical activity: Over, 22; under, 6; normal, 65.

There were no comparable figures for children not having poliomyelitis.

O. Seasonal incidence of poliomyelitis: "In an epidemic area in the northern part of the U. S. usually a few cases appear in June, rather definite evidence of an epidemic in July, etc. . . . In the Southern States the curve of the epidemic shows a tendency to start and end one or two months earlier." (Wilson, Oxford Medicine, Vol. 5, p. 124 (16)).

P. Mechanisms of Defense. (Amoss and Aycock, Tice, Vol. 5, p. 341).

1. Neutralization by nasal secretions.

2. As illustrated by the need to provoke inflammation by the injection of foreign protein intraspinally in order to cause infection by intravenous injection of virus.

3. Immune bodies in the serum.

"The chances . . . supposing an active virus to be present, would be a function of the percentage product of the three major factors." (Amoss and Aycock, *supra cit.*) "The evidence is pretty conclusive that the virus itself is very widespread, at least in epidemic times. . . . No direct evidence whatever has been offered which would indicate any particular insect." (Wilson, Oxford Med., Vol. 5, p. 124 (18)).

"There seems to be little or no tendency for the disease to occur in institutions or to spread through the inhabitants of an institution. There is no evidence of any spread from school infection." (Brain, W. R.: Oxford Med., Vol. 6, p. 371).

Q. Rasmussen and his co-workers found that thiamine deficiency seemed to increase the resistance of mice to the virus. (*J. Infect. Dis., 74,* 41, 1944), but this did not hold with monkeys. (*Proc. Soc. Exper. Biol. & Med., 58*: 42, January, 1945). The question of deficiency, especially of the vitamin B complex, might have to be considered in connection with experiments on the effect of heat and light in the etiology of poliomyelitis.

R. Experiments on monkeys proposed:

1. To determine whether the effect of heat and light is comparable to the injection intraspinally of foreign protein in rendering the animal susceptible to infection by intravenous injection of the virus.

2. To determine whether the effect of heat and light by "nose closing", or otherwise, increases susceptibility to infection by virus by the nasal route.

3. To determine whether heat and light increase susceptibility to infection by the gastro-intestinal route.

4. Other correlated experiments: (a) Exercise; (b) Nutrition; (c) Age.

S. Observations proposed:

Of the physical activities and exposure to heat and light of victims of poliomyelitis prior to developing the disease.

T. The appearance of two cases in a community might be regarded as an indication of a significant prevalence of active virus in that area. If the ideas herein embodied receive any support from experimentation and observation, some public health officials might care to set up a program designed to test the efficacy of suitable restriction of physical activity and of exposure to heat and light as a preventive measure against the development of new cases.

U. In the consideration of the effect of heat and light, secondary questions would arise as to the relative influence of temperature, humidity, and wind as in the problem of heat effects generally, and the problem of total heat load *vs.* light rays of special wave length.

V. The idea is that the over-wrought sergeant in *A Walk in the Sun* should have developed poliomyelitis if the active virus happened to be present in his mucous membranes, and if he was not immune.

W. Hypothetical Pathogenesis:

Active virus + lack of immunity + a central nervous system conditioned by the climatic and physiological factors tending toward "Heat Disease" results in paralytic poliomyelitis.

SUPPLEMENTARY NOTES

X. In tracing the development of an epidemic it would seem that in the chain of transmission, "reported cases" would lag behind their starting point in another previous case by as much perhaps as three weeks; representing the sum of time required for (1) Patient A to transmit to Carrier B, (2) Carrier B to come into contact with Patient C; (3) the incubation period in Patient C; (4) the reporting

the case of Patient C. Thus, in thinking of the "peak week" or the "median case" (not necessarily the same in time) perhaps there would be a throw-back of three weeks to the source of infection for those cases; and in thinking of the timing of the "susceptibility of the host" (Patient C), there would be a throw-back of somewhat less than three weeks, the sum of (1) and (2). The time for "date of onset" in Patient C would be represented by the sum of (1) (2) and (3).

Y. An epidemic in a given area may start and end after the summer solstice (usually a relatively minor epidemic) but an epidemic starting before the summer solstice (as major epidemics usually do) rarely has been observed to begin to decline before the summer solstice.

Z. As reported by J. R. Paul, W. P. Havens, Jr., and C. E. Van Rooyen: In Egypt poliomyelitis has not appeared in epidemic form from 1933-1942. It is more of an all-year round disease, "with maximal incidence in March, April and May, and again in October." (Poliomyelitis in British and American Troops in the Middle East, *Brit. Med. J., 1*: 841, June 24, 1944). Likewise, pyrheliometric measurements reveal a variation in seasonal intensity that is unusual* for the north temperate zone, with a maximum in January and a minimum in June, April being of the same order as October . . . (Smith, J. H.: The Influence of Solar Rays on Metabolism, *Arch. Int. Med., 48*: 907, Nov. part 2, 1931).

AA. James F. Rinehart reported as follows: "Summary: Epidemiological considerations suggest that there is some predisposing factor in the host which increases his susceptibility to poliomyelitis. Although the virus is probably widely disseminated during epidemic periods relatively few develop the disease. Studies of patients early in the course of the illness reveal the common occurrence of salt depletion and hemo-concentration. It is suggested that this may be a factor predisposing to virus invasion and the development of the disease. The decided summer incidence of poliomyelitis, and the frequent association of the disease with antecedent strenuous physical activity are in harmony with this concept. The active child might be particularly liable to lose significant amounts of salt through sweating in hot weather. Further clinical investigation and appropriate animal studies in this field are clearly indicated. Attention to salt and water metabolism would appear desirable in the management of cases." (Salt Metabolism in Poliomyelitis, *J. Nerv. & Ment. Dis., 99*: 825, 1944). Salt as a possible preventive seems implied.

BB. "The mice acclimated (for three weeks) to 13° C. and held at that temperature after inoculation never showed symptoms of paralysis in less than 11 days, with 13 days being required to establish 50 per cent mortality. In contrast to this, mice adapted to 22° C. and held at that temperature after injection showed 50 per cent mortality at the end of seven days, and mice acclimated to and held at 32° C. began showing symptoms and dying as early as the fifth day." (Holtman, D. F.: The Effect of Environmental Temperature on Mouse Susceptibility to Poliomyelitis Virus, *Science, 103*: 137, Feb. 1, 1946).

It should be noted that similar results have been obtained in other infectious diseases. (Aycock, W. L.; Lutman, G. E., and Foley, G. E.: Seasonal Prevalence as a Principle in Epidemiology, *Am. J. Med. Sc., 209*: 395, March, 1945).

CC. According to Petersen, as compared with other mutually transmitted infections, poliomyelitis exhibits a difference in statistical behavior best explained by weather conditions, and of these light is the most probable factor in view of the regularity in its seasonal variation—"The conclusion seems to be that the steepness of the poliomyelitis epidemics depends on the absolute intensity of the sunlight at the equinox (autumn). . . . The effects of the seasonal variation of the light . . . seems to be . . . a general lowering of the resistance. . . ." (Petersen, H.: The Relation between Light and the Epidemic Curve of Poliomyelitis with an Attempted Epidemic Theory Explaining Epidemic Waves as a Statistical Consequence of the Mechanism of Infection, *Acta Med. Scand., 107*: 282 and 310, 1941).

DD. Negative results were obtained in an investigation designed to determine "whether or not cold weather or changes from warm to cold could . . . render infection with the virus of poliomyelitis difficult." (Sabin, A. B.: Influence of Climate on Susceptibility of Monkeys to Intranasal Infection with Poliomyelitis Virus, *Proc. Soc. Exper. Biol. & Med., 34*: 686, June, 1936).

EE. Greater exposure to heat and light of the

***This comparison is subject to question pending further examination.**

(a) male as compared to the female and of the (b) rural as compared to the urban resident, generally is to be expected and would accord with the relative incidence of poliomyelitis in these groups.

FF. The relative immunity of the Negro to sunburn and heat effects generally, accords with the lower incidence in this race as compared to the whites.

GG. Aycock thought there was evidence to suggest "that some discrepancy in physiologic adaptation to climate and season may be a major factor in determining" clinical poliomyelitis. (Aycock, W. L.: Immunity in Virus Diseases, *J. A. M. A., 97*: 1199, 1931).

HH. ". . . heat exhaustion or heat collapse . . . may require several weeks for its full development; but under the conditions of hard work and extreme exposure collapse may occur in less than an hour." (Kammer, A. G.: Heat Sickness, Tice 6, 383).

The seasonal incidence of poliomyelitis may reflect a cumulative influence on individuals of oncoming and fully developed summer.

II. Poliomyelitis has been spoken of as a disease of warm weather in cool climates. If there are cumulative effects in summer and if they are greater in proportion to lack of heat and light in winter, these effects should be greatest in the temperate zone (where poliomyelitis is most prevalent). It is generally known that winter is warm in the Tropics and cold in the Arctic, but as to summer in the temperate zone it is not as generally known that the caloric value of solar radiation in mid-summer is as great at Fairbanks, Alaska as at Miami, Florida. (Hand, I. F.: Review of United States Weather Bureau Solar Radiation Investigations, *Monthly Weather Review, 65*: 415, December, 1937. See also Smith, J. H.: An Index of Solar Radiation in the Temperate Zone, *Tr. Am. Clin. & Climatol. A.* (1940) *56*: 199, 1941).

JJ. When a sterile meningitis had been provoked in monkeys, dyes injected intravenously colored the spinal fluid, indicating passage through the choroid plexus ("the blood—C. N. S. barrier"), but in the normal monkey and in monkeys in the preparalytic and paralytic stages of poliomyelitis, though the dyes colored gray matter, including the anterior horns of the spinal cord, indicating passage by channels other than the choroid plexus, there was little tendency to color the spinal fluid. (Harmon, P. H., and Krigsten, W. M.: Tests for the Blood—C. N. S. Barrier in Experimental Poliomyelitis, *Proc. Soc. Exper. Biol. and Med., 36*: 240, 1937. See also Faber, H. K.: Visualization of Preparalytic Lesions of Poliomyelitis by Intravital Staining, *Proc. Soc. Exper. Biol. and Med., 35*: 10, 1936).

KK. Experiments on monkeys—proposed: To determine whether the effect of heat and light is comparable to the injection intraspinally of foreign protein in rendering the spinal fluid subject to coloration by intravenous injection of dyes, with details planned to determine:

(1) Whether there are indications of a cumulative influence of solar radiation as shown by variations in dye coloration of the spinal fluid when the experiment is repeated at intervals in an animal subjected to progressive exposures comparable to those encountered in on-coming and fully developed summer.

(2) Whether there is dye coloration of the spinal fluid under conditions of more "extreme exposure".

These data might facilitate work with virus in monkeys.

Recasting this material, at least four possible lines of investigation emerge.

1. Virus infection of monkeys.
2. Other experimental work with animals.
   (a) Virus infection of mice.
   (b) Dye injection of monkeys.
3. Salt metabolism in patients having poliomyelitis.
4. Field investigations of certain conditions of environment and activity prior to development of the disease.

These various approaches obviously require various techniques and facilities. By arrangement with colleagues, chiefly at the Medical College of Virginia, there is prospect of carrying out the work under the second and third headings. As to the first heading, since it is not now apparent just where or when this work can be done, it has been felt that this form of publication is justified on the ground that it might engage the interest of investigators specially qualified to work with virus in monkeys. Moreover, the value of results obtained from any of the work outlined could be better weighed if there should be available for comparison results of similar studies made elsewhere. Indeed, with

XUM

regard to clinical studies on salt metabolism, and the field studies under the fourth heading, very probably it would be necessary to seek cooperation in areas where the prevalence of the disease offered opportunity for the studies.

Still another benefit is anticipated from putting the material in its present form. The details presented are almost certainly faulty in some respects and criticism should help to furnish any modification or redirection needed for arriving at proof or disproof of the basic idea. It is fully to be expected that as the work progresses such modifications will be made by the group at the College. Already, thanks are due for constructive suggestions made by Dr. William B. Porter, Professor of Medicine; Dr. Wyndham B. Blanton, Professor of Clinical Medicine; and Dr. John Bell Williams, Director of the McGuire Clinic and St. Luke's Hospital.

Marriage Good for Long and Healthful Life.

Marriage is a good prescription for a long and healthful life, statistics show.

Writing in the March issue of *Hygeia,* health magazine of the American Medical Association, Rose and Irv Leiberman, Cleveland, Ohio, point out that the odds are against bachelors, spinsters, and the widowed and divorced living as long as married persons. In this country, for each 100 married men 20 years of age and over who die, 141 single men die, they say. Single women fare better; for every 100 married women of 20 and over, 117 single women die.

Married persons also have better nerves, are less subject to mental disease and mental breakdown, and have a lower mortality rate from heart disease, cancer, tuberculosis, accidents, and suicide, they emphasize. Marriage reduces man's chance of dying by accident by more than half throughout most of his life, and the chances of the single man dying of tuberculosis are two to three times that of the married man, according to the article. Tuberculosis deaths are three to four times as numerous among widows under 35 as among the married, and the chances of death from breast cancer are two-thirds greater among single women than among married.

The difference in mortality rates may be explained by the theories that marriage promotes better and more rational habits of eating, sleeping, and recreation, causes men and women to avoid hazardous adventures, violent sports, and sources of germ infection, and elicits mutual concern over health which results in consulting a doctor before illness becomes advanced, the authors suggest.

The Leslie Dana Gold Medal for 1948,

An annual national award for outstanding achievement in the prevention of blindness and the conservation of vision, was presented on March 25 at a dinner in St. Louis to Dr. Lawrence T. Post of that city. Dr. Post, Professor of Clinical Ophthalmology and head of the Department of Ophthalmology at Washington University Medical School, was selected for this honor by the St. Louis Society for the Blind. The award is given upon the recommendation of the Association for Research in Ophthalmology.

XUM

SPONTANEOUS HEMOPNEUMOTHORAX—REPORT OF TWO CASES

C. LYDON HARRELL, M.D., F.A.C.P., F.C.C.P.,
Norfolk, Virginia.

My purpose in reporting these cases is to point out the relative rarity of the condition, the importance of early diagnosis, and the importance of removing blood from the pleural space when it is found.

Bloody fluid in the pleural cavity is a fairly common occurrence in conjunction with such diseases as malignancy of the pleura or lung; in pulmonary tuberculosis, especially those cases being treated by artificial pneumothorax; in Hodgkin's disease; and in traumatic injuries of the chest, as stab wounds, bullet wounds and war injuries. Spontaneous pneumothorax without blood or fluid is a fairly common occurrence, but spontaneous pneumothorax with gross blood in the pleural cavity in an apparently healthy individual is very uncommon—fifty odd cases being recorded.

CASE 1.—Mrs. W., white housewife, age 42, in apparently good health, on February 12, 1948, while shoveling snow from the sidewalk, was taken with soreness in the left chest. However, it was not sore enough in the beginning to stop her from working. The pain continued to grow more severe; she became short of breath. After about eight hours of suffering, she called her physician, Dr. W. S. Hadley. He found her in so much distress and pain that he gave her a "hypo." of morphine and sent her to a hospital where she was put in an oxygen tent.

I was asked to see her the next day, which was February 14. I found the patient quite sick, cyanotic, complaining of pain in the left chest, pulse 100, poor volume, blood pressure 130-90. The left chest lagged on inspiration; it was flat to percussion over the lower half. Tactile and vocal fremitus were absent over this area; hyper-resonant above. The heart was pushed to the right. Exaggerated breath sounds with a few squeaking rales were heard over the right chest, probably compensatory.

Diagnosis: Collapsed Lung with pleurisy with effusion.

An x-ray of her chest revealed the left lung entirely collapsed, heart pushed to right, and left chest half full of fluid. On account of the respiratory distress, I attempted to remove the fluid from the chest. Much to my surprise I found gross blood. I removed 650 cc., after which she felt relieved. The following morning I removed 400 cc. more.

She was given penicillin and sulfadiazine. Her temperature ranged from 99 to 100 for four days. On February 14, the day after entering the hospital, her hemoglobin was 81%; red count 4,460,000; white count 23,300. On February 16, hemoglobin 81%; red count 4,120,000; and white count 13,400. The aspirated fluid was negative on culture.

The electrocardiogram revealed a right heart strain and a marked degree of myocardial damage. The patient had an uneventful recovery, was discharged from the hospital on February 21, 1948, nine days after having been taken ill. She was last seen on April 12, 1948, in good health. The fluoroscope revealed a slightly thickened pleura at left base, but diaphragm moved freely.

CASE 2.—W. M., age 35, upholsterer by trade, felt perfectly well until March 2, 1948. In the evening while shaving, he felt a sudden sharp pain in right chest which lasted only a few minutes, after which he retired and had a good night's sleep. The next day he went to work. Though he did not feel as well as usual, he had no specific complaints. In the afternoon of this day, the pain in the right chest returned, more acute and severe than ever, accompanied by shortness of breath. He spent the night in bed in considerable pain and dyspnea. The next day Dr. Herbert Rogers was called, who immediately sent him to De Paul Hospital.

On admission, the patient appeared extremely ill. Blood pressure was 60-40, pulse 140. The skin was cold and moist, in extreme shock. The chest findings on admission revealed absent breath sounds over the entire right chest, percussion note tympanitic over entire right chest and beyond the sternum to left. The heart was pushed to the left, apex felt in left in mid-axillary line. A diagnosis of spontaneous pneumothorax was suspected.

Fifteen minutes after admission examination, the blood pressure could not be obtained. A *stat.* thoracentesis was done in posterior axillary line, 7th

*Presented at the Spring Clinic of the Norfolk County Medical Society, May 26, 1948.

interspace. Gross blood was obtained. The needle was withdrawn and an x-ray was made of the chest in a supine position. This revealed a fluid level. In the meantime, the physical findings had changed from a tympanitic note to flatness up to 3rd interspace.

Another aspiration was attempted, removing 500 cc. of gross blood and 750 cc. of air in 15 minutes. This was followed by dramatic improvement in the patient's condition. Blood pressure 98-60, pulse 100, respiration 28. He was started on penicillin the day of admission, March 3, and stopped on the 12th. March 6, his hemoglobin was 73%, red blood count 3,470,000, white blood count, 9,200. The patient continued to bleed, which necessitated frequent aspiration, which was performed seven times between March 3 and March 14, removing a total of 3,925 cc. All proved negative on culture. He was transfused twice. On March 15, his hemoglobin was 80%, red blood count 4,200,000, white blood count 19,100. He ran temperature four days, the highest 101°.

An x-ray made on March 14, on A. P. and lateral, revealed some infiltration of lower right and mid lobes. A pulmonary neoplasm was considered. He was discharged from hospital on March 20, in very good condition. He was readmitted on April 12, for a bronchoscopic examination. The middle and lower bronchi were found open, excretion removed and sent to laboratory. No tumor cells were found. Hemoglobin was 90%, red blood count 4,370,000, white blood count 9,000. An x-ray made of his chest after the bronchoscopic examination revealed much clearing of the lung with a thickened pleura over the lower portion of right lung. No fluid present. He was again discharged from hospital on April 17, in good condition. Final Impression: Spontaneous hemopneumothorax; infiltrative process in right lower lobe of lung of unknown etiology.

The first reference we have on this subject was in 1900. G. Pitt, of England, reported a case which was published in the "Transactions of the Clinical Society of London". H. D. Rollesten in the same year reported a similar case in the same journal. Both of these cases proved fatal. Pitt's case was treated by open drainage. In the light of our present knowledge, we feel that was not the proper thing to do.

Heise and Krouse, in 1920, reported a case following artificial pneumothorax. It was an acute case of tuberculosis. A few hours after the first injection 350 cc. of nitrogen gas, the patient had an acute spontaneous pneumothorax and died fourteen hours later. At autopsy the pleural space was found to have 2000 cc. of clotted blood. A small hole about 2 mm. in diameter was found in the lung over a small cavity. There was also a ruptured pleural band. No bleeding vessel was found.

Hopkins, in 1937, reported three cases and collected forty-six from the literature with eight fatalities. He states, "During the first forty-eight hours aspiration is justifiable for the control of dyspnea, but not as a routine measure. When the bleeding has stopped, the fluid should be removed and replaced by air".[1]

In October, 1938, Milton R. Lauria, of Sea View Hospital, reported five cases, one of which came to autopsy. "An Italian baker, age 22, was awakened during the night with severe pain in the left chest and shortness of breath. He continued to grow worse. About sixteen hours after the onset, he was taken to the hospital in an ambulance. He was aspirated only once, removing 500 cc. of air and 750 cc. of blood. He expired ninety hours after the onset. Autopsy revealed the left chest 75% filled with blood. The lung was completely collapsed. There was no evidence of tuberculosis of the lung. In the interlobar sulcus there was a small emphysematous bleb with a rupture about three-eighths of an inch long and one-eighth of an inch wide through which frothy fluid and air could be expressed. There was no evidence of a bleeding vessel found."[2]

In 1942, Hartzell reported three cases and reviewed the literature, collecting forty other cases.

In 1945, Franklin reported a case whose symptoms were a little confusing. A white male, age 23, was taken with severe pain in right chest, radiating to right shoulder and to the upper right quadrant of the abdomen. The right abdominal muscles were rigid. On the third day thoracentesis was performed, removing 500 cc. of gross blood. He was aspirated four times, each on alternate days, removing a total of 2700 cc. of bloody fluid recovered. Two other cases have been reported with acute abdominal pain where the abdomen was opened, suspecting a perforated ulcer. The abdominal pain in all probability was reflex from diaphragm, costal and parietal pleura.[3]

Etiology.—The true cause of spontaneous hemopneumothorax has not been definitely proven. It

is believed that spontaneous pneumothorax is the result of ruptured emphysematous bullae or blebs. As the lung goes down, intrapleural adhesions are torn, which produce bleeding, since it is known that pleural bands or adhesions are very vascular. In all probability, the bleeding in most instances comes from the parietal pleura. If the hemorrhage was coming from a rent in the visceral pleura, it would automatically stop as the lung collapsed.

An early diagnosis is very important, though it should not be so difficult. The patient is usually seen in shock, complaining of a severe pain in the chest, usually radiating to the shoulder of the affected side, though it may radiate to the epigastrium. Respiration is difficult, rapid and shallow. The affected side is splinted. The skin is moist and clammy. The pulse as a rule is rapid and blood pressure low. In Case 2, the systolic pressure was only 60 mm. The lower portion of the chest on the affected side is flat to percussion and hyper-resonant or tympanitic above. The heart is usually pushed to the opposite side. The character of the fluid can be determined only by thoracentesis.

Treatment.—Prompt treatment is very necessary. Fourteen of forty-four cases collected by Hartzell died; five of them died within twenty-four hours after reaching the hospital. First and most important is to combat shock, which usually is quite severe. Next, in importance, is the removal of the fluid and air from the pleural cavity, taking care not to release the pressure too fast or there will be too rapid a shift of the mediastinal structures. Aspirate every twenty-four to forty-eight hours as long as bleeding occurs. Keep the pleural space dry and give the lung a better chance to re-expand. The blood lost should be replaced by transfusion as often as necessary; antibiotics to combat infection.

I feel that blood in the pleural cavity should be removed for three reasons. First, to release pressure and enable the lung to re-expand more promptly with much earlier recovery. Second, blood is one of the best culture medias we have. There is always danger of empyema. Third, if blood is permitted to remain in the pleural cavity, the pleural becomes thickened by irritation and deposits of fibrin, resulting in atelectasis of the lung.

Why blood does not clot in the pleural cavity is not clear. Quoting from Hartzell's article, "The fluidity of the blood has been observed not alone in spontaneous hemopneumothorax, but also in pleural bleeding of traumatic and other origin. According to Sacquepee, blood in the pleural space becomes incoagulable after contact with the pleural membranes for four to five hours in man, after two hours in dog. This is true only if the pleura is not infected. Consequently, the discovery of clotted blood when performing thoracentesis means either that bleeding has not yet stopped, or that infection has taken place.

The probable explanation of the incoagulability of blood in hemothorax originates with Trousseau. According to this author, blood actually clots rapidly in the pleural cavity, even more rapidly than in external hemorrhage. As a result of agitation produced by cardiac and respiratory movements, the blood is rapidly defibrinated and the fibrin deposited on pleural surfaces before the red cells have had time to precipitate. Massive deposition of fibrin on pleural surfaces and surrounding the mediastinum was observed in the autopsied case of Jones and Gilbert, and these authors attributed the death of their patient to circulatory obstruction resulting from the contraction of organizing fibrin masses. In other autopsied cases, fibrin masses have not been found.[4]

Since sending this article to the press, a third case of Spontaneous Hemopneumothorax has come under my observation:

Mrs. S., age 29, white, while washing dishes, was taken with an acute stitch-like pain in the lower right chest back, followed by shortness of breath a few hours later. She called a physician who saw her about six hours later, and he told her she had a collapsed lung.

Five days later she came under my observation. By that time her chest was half filled with fluid and the upper lobe was about 25% collapsed. Aspiration revealed pure blood. She has been aspirated four times, getting about 1900 cc. altogether. Transfused twice and doing nicely.

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XUM

TREATMENT OF CARCINOMA OF THE ESOPHAGUS*

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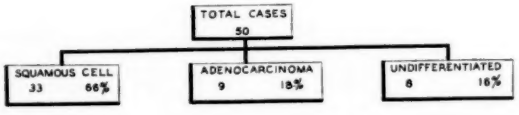
Cancer of the esophagus ranks fourth in frequency among malignant tumors occurring in the male beyond 20 years of age. A critical review of cancer of this region reveals the startling facts that few have been cured by any method of treatment, and few have received treatment when the malignant process was limited to the confines of the esophagus.

The successful treatment of cancer of the gullet depends upon early diagnosis. Cures depend upon the proper management of the patient with the presenting complaints of food "sticking in the throat" and difficulty in swallowing. These symptoms require immediate investigation by fluoroscopy during the administration of barium and esophagoscopic examination with biopsy of suspicious lesions.

The esophagus is the only portion of the gastrointestinal tract lined by squamous cell epithelium and approximately 70 per cent of the malignant tumors of this region are of the squamous cell variety (Table I). The destruction of cancer in this location by means of x-ray appears biologically possible, for cancer of the cervix uteri, lip, skin and larynx are favorably treated by this method.

CARCINOMA OF THE ESOPHAGUS
MEDICAL COLLEGE OF VA.
JAN 1942 - JAN 1948

TABLE I - CELL TYPE



The narrow lumen and thin walls of this organ are serious handicaps in the radium treatment of esophagus cancer. The radium applicator is usually introduced into the esophagus in a retrograde fashion by way of a gastrostomy. Stenosis of the esophageal lumen by cancer prevents proper tissue contact and the proximity of the applicator to the thin gullet wall leads to necrosis and later perforation. Radium has not found a place in the treatment of esophagus cancer and radiation therapy has had to depend on the external application of x-rays. Sporadic cases are reported in the literature where cancer of the esophagus has been cured by x-ray therapy, but in worthwhile series of cases this method of treatment is neither curative nor palliative in effect. Cleminson and Monkhouse[2] treated 80 patients with cancer of the esophagus by intensive x-ray therapy and found the survival period to be 6 months. It would appear that the unfavorable results with x-ray therapy can be ascribed to the depth of the esophagus within the thorax rather than to the inherent radio-resistiveness of these tumors.

At the present time surgical extirpation of esophagus cancer offers the only hope of cure to these patients. Progress in the development of surgery of the esophagus has been slow and for centuries this organ has been considered inaccessible to the surgeon's art. Refinement of surgical technique, chemotherapy and antibiotics, blood transfusions, and improvements in preoperative and postoperative care have contributed to the rapid development of esophageal surgery in the past decade. In 1912 Torek performed the first successful resection of the esophagus for cancer. In 1937 Adams and Phemister[1] performed the first resection of the distal one-third of the esophagus for cancer with immediate restitution of esophagogastric continuity. In the past ten years it would seem that the lack of experience of surgeons in the technical management of the operation, delay in diagnosis after the onset of symptoms, late or no referrals of patients for surgical treatment, and the high incidence of recurrence of cancer following operation, have all contributed to the none too secure role of surgery in the treatment of this disease. Recent reports[3,4,5] of surgically treated cases invalidate this conclusion and there are an ever increasing number of patients cured by this method.

Cancer of the esophagus can be cured in all patients at some stage in its development and growth, but it is in the early stages that symptoms are nil. The patient must be accepted for treatment in all stages of the disease. Treatment becomes a matter

*Read before Symposium on Malignant Growths, Medical College of Virginia, March 22 to March 27, 1948.

of palliation and providing for relief of distress in some, while in others curative attempts are indicated. If the cancer appears to be confined to the esophagus without evidence of metastasis and invasion of contiguous structures it is advisable to explore the lesion. The cases may be divided into operable and inoperable groups.

In the inoperable group the average life expectancy is from 6 to 9 months. Death by starvation is none too kind an existence and it is recommended that gastrostomy be performed after adequate preparation of the patient for operation. All too frequently the preoperative preparation of the patient is neglected, hoping that the gastrostomy will immediately restore the well-being of the victim. In 66 carcinomas of the mid-esophagus Sweet[5] found 38 per cent to be inoperable, while the remaining were suitable for exploration. Thirty-two (48.5 per cent) of the entire group were suitable for resection with esophagogastrostomy.

The operable group comprises patients whose general condition is satisfactory for resection of the esophagus and in whom there is no evidence of metastasis and extension to neighboring vital structures. A bronchoscopy is carried out to exclude invasion of the trachea or bronchi. The management of the operable group will be discussed by considering the preoperative preparation and care of the patient during operation.

PREOPERATIVE PREPARATION

The presence of total obstruction of the esophagus by carcinoma is not indicative of inoperability, but these patients require the utmost care in preparation for a resection. A careful appraisal of the patient's general condition is made by determining the renal and cardiovascular status. Protein and vitamin deficiences must be corrected either by parenteral or oral administration of these substances. Secondary anemia is overcome by multiple transfusions. A gastrostomy is contra-indicated in that it interferes with the establishment of intestinal continuity at the time of resection. A jejunostomy may become necessary when it is not possible to pass a Levine tube through the esophagus into the stomach for feeding purposes.

CARE OF PATIENT DURING OPERATION

A competent and well trained physician-anesthetist is indispensable in the management of these patients. Endotracheal nitrous oxide, oxygen and ether vapor is the anesthetic of choice. The esophagus is approached by entering the left pleural cavity through the periosteal bed of the resected eighth or ninth ribs. Cancer of the esophagus is located in the middle and lower thirds of the organ in approximately 80 per cent of the patients. If the primary lesion shows no evidence of invasion of structures which cannot be sacrificed with the tumor, resectability has been established even in the presence of widespread lymph node extension. The esophagus is mobilized well above the disease. The

Fig. 1. Distal two-thirds of esophagus resected for carcinoma. Contrast filling with barium shows the anastomosis of the stomach with the esophagus above the arch of the aorta.

diaphragm is split and the stomach is delivered into the wound. Frequently node metastasis is present along the lesser curvature of the stomach. Division of the left gastric artery close to its origin from the cœliac axis permits wide removal of this group of lymph nodes and partial mobilization of the stomach. The vasa brevia arteries and left gastroepiploic artery are divided, permitting complete mobilization of the stomach. It is possible to bring the fundus of the stomach well above the arch of the aorta for an anastomosis with the stump of the esophagus in high lying lesions (Fig. I).

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The lower esophagus is separated from the stomach by making the incision through the stomach well away from the cancer. After closing the gastric incision, the stomach is brought up into the chest and the anastomosis is made between the two organs. This type of operation with immediate restitution of esophagogastric continuity is curative in its approach and an excellent palliative procedure comparable to gastric resection for carcinoma of the stomach. If the primary lesion of the esophagus invades neighboring vital structures which cannot be removed with the cancer, the diaphragm is opened and a gastrostomy is performed for later nutritional needs. If an apparently curable cancer lies too high in the esophagus for the establishment of an anastomosis with the stomach, the entire esophagus is resected, bringing the cervical end of the organ out the neck and establishing a gastrostomy below. This operation (Torek) is not applicable to palliation in obvious incurable high lying esophagus cancer. During the operative procedure provisions are made for the adequate replacement of blood loss.

Fifty patients with carcinoma of the esophagus were admitted to the Medical College of Virginia Hospital between January, 1942, and January, 1948. The cell type was not unusual (Table I). The operability rate (18 per cent) is strikingly low, but a detail analysis of the entire group reveals that 23 patients (46 per cent) were not referred to surgery (Table II). Metastasis to the skin and cervical nodes, and invasion of the bronchus, recurrent laryngeal nerve and pharynx account for the placement of 12 patients in the inoperable group. Six additional patients were so classified because of age and poor general condition. Resection with esophagogastric anastomosis was possible in 4 of the 9 patients subjected to exploration. Invasion of the aorta, pleural extension, and massive nodal involvement contra-indicated resection in 5 patients. In larger series of case reports it would seem that approximately 50 per cent of patients with carcinoma of the esophagus are amenable to surgical extirpation of the lesion (Table III).

TABLE II - OPERABILITY STATUS ESOPHAGUS CANCER

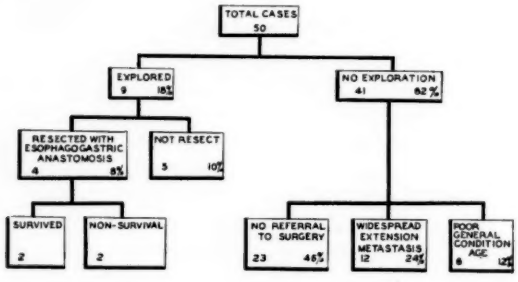

TABLE III - PUBLISHED SERIES OF CASES OF CARCINOMA OF THE ESOPHAGUS

AUTHOR	TOTAL CASES	OPERABLE	RESECTABLE
GARLOCK	?	131	60-46%
ADAMS	100	28	18-18%
SWEET	88 MID-ESOPHAGUS	41	32-48.5%

TABLE IV - LATE RESULTS IN 7 RESECTED CASES CANCER ESOPHAGUS

LIVING OVER 1 YEAR	3
LIVING 3 TO 4 YEARS	1
DIED 1 TO 2 YEARS	3

Two patients survived resection of the esophagus (Table II). In 5 additional esophageal resections performed by the author elsewhere for carcinoma of the esophagus, survival was of sufficient duration to determine something about the late results. A follow-up of these seven patients shows that all lived beyond a period of one year (Table IV). One is living and apparently well 45 months following resection. Three died of recurrence of the carcinoma over one year after palliative resection. The gratitude of these patients and their apparent comfort for many months following palliative resection offers a stimulus to expanding the range of resectability in patients where cure is impossible.

The number of five year cures or even three year cures of esophagus cancer by resection is too small to permit drawing conclusions. Surgical extirpation of esophagus cancer would seem to offer the only hope of cure.

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Emotional Stress and Headaches.

Most headaches are caused by emotional stress, five New York physicians indicate in the January 22 issue of *The Journal of the American Medical Association.*

Three of the physicians—Arnold P. Friedman, of the Headache Clinic Section, Mental Hygiene Service, Veterans Administration, and Charles Brenner and Sidney Carter, from the Division of Neuropsychiatry, Montefiore Hospital, and the College of Physicians and Surgeons, Columbia University—conducted special headache clinics. They found that headaches for which there is no apparent physical cause and headaches following head injuries were by far the most common among patients.

Treating 494 patients with headaches of these kinds, the three physicians found that 50 to 60 per cent responded favorably to almost any medicine given them, and nearly as well to placebos, harmless but ineffective substitutes for drugs. Treatments used included psychotherapy, pain-relieving drugs, substances to constrict and dilate the blood vessels, vitamins and hormones.

Results of the study strongly suggest that the effectiveness of the medications was caused primarily by the patient's psychologic reaction to the treatment situation in general and to having received a "remedy" from the doctor.

Robert M. Marcussen, M.D., and Harold G. Wolff, M.D., from the New York Hospital and the Departments of Medicine and Psychiatry, Cornell University Medical College, made a study of migraine headache. The typical sufferer from migraine headache, they found, is ambitious and tends to be a perfectionist. "They are tense driving persons who have found that doing more than and better than their fellows brings a good deal of satisfaction. However, this end is accomplished at a great cost in energy. They become resentful because they cannot keep up with the load which the world and themselves impose. The natural outcome is tension, fatigue, and exhaustion; in this setting headache makes its appearance. Rage, resentment, and frustration are often common denominators of the emotional derangement preceding an attack of migraine. However, dramatic events need not precede headache—many follow long periods of so-called routine living with slowly accumulating tension."

Although the doctor can make the migraine patient aware of the cost of such a way of life, the decision of what to do about it is the patient's, the physicians emphasize.

XUM

RESULTS OF 1000 EXAMINATIONS IN THE BESSIE DUNN MILLER CANCER DETECTION CENTER*

WILLIAM E. BRAY, JR., M.D.,
Charlottesville, Virginia.

The Bessie Dunn Miller Center was established in February, 1945, by the Albemarle Home Demonstration Group as a memorial to the late Mrs. Miller, a cancer victim, who was very active in health work among the rural women. It was sponsored by this group, the Albemarle County Medical Society, the University of Virginia Hospital, and the Virginia Cancer Society; financial support was later furnished by the Community Chest Fund.

This Center was patterned after those then in operation in New York City, Philadelphia, and Chicago. Our clinic differed, however, in that the examinations were limited to well people only. It was the seventh clinic established in the United States and the first to deal primarily with rural women.

The demand for this type of clinic arose as a result of the all out attack on the problem of cancer. The important factor of prevention and early control of cancer had been long neglected. Educational campaigns of the various cancer organizations supplied the incentive. Many more individuals became aware of the cancer problem and sought the advice of their physicians. In 1945 there was a definite shortage of physicians here and they were too busy to undertake routine examinations on well individuals. As a result of the increased publicity, many individuals became quite concerned and needed examinations for reassurance. The majority of these cancer detection centers were begun by lay individuals, who were interested in cancer work, with the cooperation of their local physicians.

Medicine then, after devoting much time to cancer, now attempted a new approach—to find and eradicate early cancer and so-called "precancerous" lesions. Individuals were encouraged to have annual or semi-annual examinations and, as a result, the demand for such centers increased. New ones are begun yearly.

*From the Department of Medicine, University of Virginia Hospital, Charlottesville.

Read before the Albemarle County Medical Society, May 6, 1948.

The purpose of our center was to offer to the people of Albemarle County and Charlottesville semi-annual and annual examinations with the object of detecting precancerous lesions and early cancer. Each individual who entered the center pledged to submit to three examinations at six to twelve month intervals, thus permitting us to follow them for eighteen to thirty-six months. Many have returned for their fourth and even fifth examination voluntarily. The Center limited the examinations to well individuals who had not consulted their physicians during the previous twelve months.

The examination consisted of a complete medical history, complete physical examination, urinalysis, complete blood counts and smear, and a 70 mm. chest survey film.

The results of these examinations and our impressions were sent to the patient's physician who carried out any additional studies or treatment. No medical advice or treatment was prescribed by the Clinic.

The role of the local physician is quite important to the success of the Center. It is only by their cooperation that the Center can function and by their participation in it that the patient benefits.

During the past three years, over 1,200 examinations have been performed on approximately 650 individuals. Females far outnumber males. The ages of the patients range from 19 to 75, predominately, however, between the ages of 40 and 60.

The report tonight deals with the first 1000 examinations. The abnormalities found are based on our initial examinations, our follow-up examinations, and reports from the local physicians of further studies, operations and pathological reports. These statistics will change from time to time as additional follow-ups reveal more definite information on some of the suspicious lesions. 30-35% of the examinees presented themselves without complaints. 30% had histories of chronic disorders such as arthritis, allergic rhinitis, and sinusitis, and 30-35% had specific complaints, some related to possible cancer. This latter group was not eligible

for admission and an honest attempt was made to keep this group small.

FIG. 1

Number of Examinations	1,000
Number of Abnormalities	589

In 1000 examinations (Fig. 1), 589 abnormalities were found involving all systems in the body. Roughly 50% of the examinees had one or more. As we shall see, the majority did not relate to cancer. This is an astoundingly large number of abnormalities in a group of people who, for the most part, consider themselves well and who had not consulted their own physicians during the previous twelve months. By early recognition and treatment of some of these, we feel that more serious illnesses were avoided.

FIG. 2

CARCINOMAS

Carcinoma Skin (Unclassified)	3
Carcinoma Rectum	1
Epidermoid Carcinoma Maxillary Sinus	1*
Carcinoma Colon	1
Carcinoma Cervix	1
Basal Cell Carcinoma of Skin	1
Carcinoma Ovary	1*
Carcinoma Sweat Gland	1
Carcinoma Prostate	1

*Died.

Eleven proven carcinomas (Fig. 2) were found, an incidence of 1.1%. Some were not found as early as we might have wished. A brief summary of some of the proven cases follows.

I. Mrs. R. H., age 47, examined April 30, 1946. Family history revealed carcinoma. Physical examination revealed a scaly area on left side of nose and cheek with slight superficial ulceration of six months duration.

Biopsy revealed a completely removed basal cell carcinoma.

II. Mrs. G. G., age 61, examined May 5, 1946. No family history of cancer. She noticed six months previously a small superficial non-tender lump between her left breast and axilla. Examination revealed a pea size hard nodule in the skin which did not appear attached to the under lying tissue. Biopsy revealed a carcinoma of a sweat gland. Radical resection was advised, but the patient refused. She has not returned to the Clinic.

III. Mrs. W. F., age 57, examined November 4, 1946. No family history of cancer. No complaints other than spotting on two occasions during the past year. Her last menstrual period occurred nine years ago. The last spotting occurred one week prior to the examination.

Examination revealed piled-up friable granulating tissue around the cervical os which bled easily. Biopsy revealed carcinoma of the cervix.

IV. Mr. C. C., age 74, examined August 21, 1946. Family history revealed many carcinomas. Pertinent history revealed epigastric burning pain, aerophagia, and intermittent constipation and diarrhea. He occasionally had noticed hemorrhoids.

Physical examination and laboratory studies were negative. He was referred to his physician for further studies.

Six months later, he was re-examined. In the interim he had G. I. x-rays which were negative. He now complained of suprapubic pain radiating into both lower quadrants synchronous with peristalsis and a desire to defecate. He was having three somewhat illformed stools a day. No blood or mucus had been noticed. Again physical examinations and blood studies were normal. Several stool examinations were negative. He returned to the Clinic four months later. He had not returned to his physician. A barium enema was obtained which revealed organic obstruction at the rectosigmoid. Proctoscopic examination revealed a carcinoma of the colon.

This case illustrates one weakness in the Center organization. This patient had symptoms suggestive of large bowel neoplasm when first seen. He returned to his physician and later to the Clinic, but in the interim, both the physician and the Clinic lost contact with him. The diagnosis was not established until eleven months after the initial examination. Under the rules of the Clinic, diagnostic studies are to be made by the patient's physician. The divided responsibility here caused a marked delay.

V. Mr. C. B., age 50, examined September 17, 1946. No family history of carcinoma. No complaints. Normal physical examination, and normal laboratory examination.

Re-examined August 12, 1947, eleven months later. For two months, he had noticed passage of bright blood by bowel, unassociated with pain. Stools had increased to three a day accompanied by gross mucus. Pruritis ani was present, accentuated by sweets.

XUM

Physical examination and blood counts were normal. Barium enema revealed a diverticulitis in the descending and sigmoid colon. He was placed on a low residue diet, antispasmodics, and told to report at intervals. Four months later he was asymptomatic on his return and had gained weight. One month later, he was found to have an advanced carcinoma of the rectum.

This unfortunate case illustrates the great value of proctoscopic examination in any individual with bowel symptoms. Carcinoma is often overlooked when another condition is present which may cause the symptoms.

There were a large number of so-called "precancerous" conditions.

FIG. 3

PRECANCEROUS LESIONS

Cervical Erosions	81
Cervical Polyps	11
Leukoplakia	2
Papilloma Skin and Mucous Membranes	4
	98

Ninety-eight precancerous lesions were found. The majority of these were totally unsuspected by the patients. On follow-up examinations most of these had been treated by their physicians and the lesions eradicated. As far as we can now tell, none of these were malignant.

There were eighty-three lesions which we were unable to classify on the first examination. These were grouped under suspicious lesions (Fig. 4) and

FIG. 4

SUSPICIOUS LESIONS

Solitary Breast Nodules	5
Cystic Mastitis	30
Ovarian Tumor	1
Uterine Fibroid	15
Active or Deeply Pigmented Moles	20
Rectal Polyp	1
Thyroid Nodules	9
Prostate Nodules	2
	83

the examinee was sent to her physician for further observation or removal of the lesion.

The solitary breast nodules were subsequently removed and proved benign and could now be reclassified under cystic mastitis. The cystic mastitis cases are being followed by their physicians and the Clinic at intervals. Several have been biopsed. A large asymptomatic and unsuspected ovarian tumor was removed, and it proved benign. One of the fibroids was the size of an eighth month pregnancy and was unsuspected by the obese patient. This was removed. The rectal polyp was removed and proved benign. Studies of the colon showed no others. The majority of the active moles were removed and no malignancies were discovered in this group, although pathological examination was not done on those which were desiccated. The desiccation of pigmented moles is to be deplored as the irritation may predispose to malignant change.

Figure 5 summarizes the wide variety of other conditions discovered on examination.

FIG. 5

MISCELLANEOUS

Anemia	
(a) Primary	2
(b) Secondary	50
Diffuse Non-Toxic Goiter	17
Nodular Non-Toxic Goiter	8
Toxic Nodular Goiter	1
Gastro-Intestinal	
Duodenal Ulcer	5
Chronic Cholecystitis	4
Spastic Colitis	2
Duodenal Diverticulum	1
Atrophic Arthritis	14
Hypertrophic Arthritis	28
Cardiovascular	
Arteriosclerotic	27
Angina	6
Rheumatic	3
Malignant Hypertension	3
Benign Hypertension	47
Hypertensive and Arteriosclerotic	7
Dextracardia	1
Respiratory	
Bronchiectasis	5
Emphysema	9
Tuberculosis	5
Diabetes	5
Multiple Sclerosis	2
Ruptured Intervertebral Disc	1
Psychoneurosis	2
Obesity	63
Hernia	1
Cystocele	16
Rectocele	9
Allergic Rhinitis	14
Asthma	10
Urticaria	2

Sinusitis	19
Eczema	8
Hemangioma	2
Lipoma	8
Polycythemia Vera	1
Rectal Fissures and Hemorrhoids	4

Some of these miscellaneous abnormalities were already known to the patient, but the vast majority of these patients did not suspect anything wrong. Many of these conditions were found early before the patient had experienced much difficulty. Each examinee was sent back to her physician for management.

In summary, in 1000 examinations, 589 abnormalities were found. Eleven cancers, ninety-eight precancerous lesions, and eighty-three suspicious lesions, a total of 190 (19%) lesions which were cancerous or may be related to cancer. 399 other abnormalities of greater or lesser degree were found.

In conclusion, I believe that the Center has proved its worth in several definite ways. The people who have entered the Center have gained some knowledge of the problem. Each has been told and given pamphlets on the important danger signs of cancer. Each woman was told how to examine her breast and urged to do so once a month and to report to her physician any changes. One examinee who had been examined six months previously and had already made a return appointment, examined her breast and noticed a small module. She reported instead to her physician who found an early malignancy. Its educational role is quite important in the problem of cancer.

Studies are now in progress elsewhere which incorporate all statistics from these clinics into one group in the hope that more information may be gained as to possible precipitating factors.

This type of clinic encourages individuals to have annual examinations. During these examinations, other abnormalities may be found early and corrected which increases the prognosis.

Discovery of cancer in its early stage lessens the mortality, and life and health can be prolonged.

Our clinic-physician relationship tends to keep his "index of suspicion" elevated.

It seems to me that individuals who consider themselves healthy, are more prone to attend such a clinic for routine examination than their physicians, and thus they avoid procrastination concerning their health.

Average Age of Physicians at Death.

The average age of physicians in the United States at death has risen steadily during the past four years, according to American Medical Association statistics.

In 1948 the average age of physicians at death was 67.4 years, says an editorial in the January 22 issue of *The Journal of the American Medical Association.* In 1947 it was 66.7 years; in 1946, 66.1 years; and in 1945, 65.3 years.

Heart disease is the number one killer among physicians. Coronary thrombosis, angina pectoris, rheumatic heart, and other heart conditions accounted for 41 per cent of the 3,230 deaths of physicians reported by *The Journal* during the year. Diseases of the nervous system were second, causing 412 deaths, cancer and other malignant tumors third, accounting for 348 deaths, and accidents fourth, accounting for 173 deaths. Falls caused more deaths than did any other type of accident, and motor vehicle accidents caused more than twice as many deaths as did air transport accidents. Other major causes of death among physicians were diseases of the respiratory system, accounting for 163 deaths, and diseases of the digestive system, accounting for 114.

Twenty-three physicians of the 3,230 total were killed in action during World War II, and 33 died while in military service.

XUM

ECHINOCOCCIC CYST OF THE LIVER*

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Presenting a single case of echinococcic cyst of the liver is prompted not by its frequency—for the disease is uncommon in the United States—but rather because of the expected increase in frequency of the disease in members of the Armed Forces, who have been scattered thruout the World. Its onset is insidious and may require years to manifest itself; thus the cases can be expected to produce many diagnostic problems in the years to come. The disease is common in central and northern Europe (Karsner)[1] and in the sheep-raising countries, such as Argentina, Uruguay, New Zealand, Australia, Italy, Syria, Greece, and Algeria.[2] In North America there totaled 482 cases of hydatid disease, reported up to 1944, and, of these, 22 were indigenous. Much of the literature is from South America, and has been recently reviewed by Davidson in the *Journal of Thoracic Surgery*, December, 1944.

The development of the disease in man is understood after a study of the evolution of the taenia and larva of *Echinococcus* tape worm. The definitive host of the tape worm is the dog (or jackal or wolf). Sheep, cows, pigs, etc., are intermediate hosts like man, and serve to perpetuate the disease. The dog becomes infected by eating the raw meat and entrails of the other animals. Man is an accidental host as far as further biological development of the parasite is concerned, since no one eats man (a dead-end in spreading the disease).

The tape worm, *echinococcus granulosa,* is found in small intestines of the dog. The ova from the worms are discharged in the stool of the dog. The worm is small, about 6 mm. long, and made up of 3 segments, the head and neck, and two proglottes, including an enlarged terminal compartment from which the eggs are discharged into the stool. The head contains suckers and hooklets, by which the worm fastens itself to the intestinal mucosa of the dog.

The ova (or embryophore) are gotten into man (or other animals) by eating uncooked food, or water. Worthen claims that eggs are present in oral secretion or on fur of animals.[2] When the egg lodges in man's stomach, the digestive juices dissolves the external coat, freeing the hexacanthus embryo, which then bores thru the gut wall, and is conveyed by either blood or lymph to any part of the body. This mode of infestation predisposes the liver to infection (75% cases).

In the liver, as in other organs, there is formed a slowly growing cysticercus, or larval stage. The cyst develops by becoming vacuolated, forming an inner germinal layer (nucleated layer), and an outer laminated or non-nucleated layer. From the germinal layer, cells form proliferative vesicles which form scolices (the heads or sources of new worms). These scolices then become pinched off and sink to the bottom of the fluid (hydatid sand). The fully developed cyst shows a wall made up microscopically of concentric laminae of hyalin chitinous-like material lined by germinal cells from which grow daughter cysts and in turn granddaughter cysts (see figure 1). The parent cyst may

Fig. 1. Portion of material removed.

grow to great size. The daughter cysts vary in size from a few millimeters to many centimeters in diameter (see figure 2).

A fibrous wall is produced by the host around the cyst, forming an adventitia. The cyst content

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is usually fluid, thin and colorless, containing salt and very little protein. Hooklets and scolices are found in the fluid and may be the source of secondary cysts. In old cases the cyst fluid becomes inspissated and putty-like, in which stage daughter cysts, scolices and hooklets are often absent.

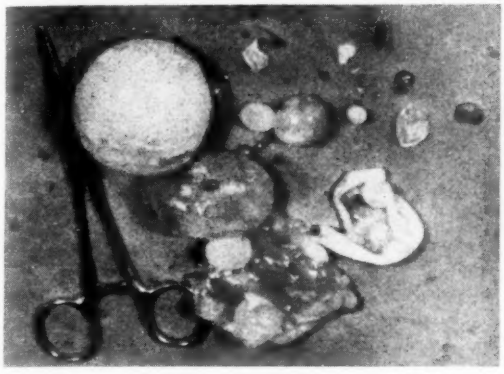

Fig. 2. Variation in size—daughter cysts.

The fluid and membranes of a simple cyst are bacteriologically sterile, and cysts without scolices and brood capsules are biologically sterile. If a cyst ruptures into a large vein, or into the peritoneum, metastatic hydatidosis and secondary hydatidosis occurs. This is important to remember in treating a case. A drop of the fluid from a cyst may produce new cysts, which may not reveal itself for years after the primary cyst was removed.

The diagnosis of echinococcic disease is very difficult, pre-operatively. According to Meaken,[4] there is only one real important parasitic disease of liver which produces cysts, and that is the echinococcus Trichinella spiralis, which will cause small cysts to form in muscles (trichinosis) but they never form large cysts like the echinococcus.

Echinococcic disease may simulate a new growth in the liver, but fluctuation of the mass is common and frequently a hydatid fremitus is felt. The general condition of the patient remains good, and jaundice is rare. It may simulate biliary tract disease, i.e., produce obstruction, rupture into gall bladder, etc.[2] Geographical distribution of the disease is important in thinking of the disease. In the lung (the 2nd most common site) the cysts are usually single, and daughter cysts are rare (Davidson). (Holman[5] presents cases with numerous daughter cysts.) They may remain symptomless for years, or until they erode or press upon a bronchus, producing pain, cough, hemoptysis. The disease progresses very slowly. (Dew[6] estimates rate growth of cysts = 1 mm. mo.)

Laboratory tests help but are not conclusive. The blood count may show an eosinophilia but this is not always present. The Weinberg complement fixation and the Casoni intra-dermal test will help, but, unless the antigen is fresh, may give false tests. In lung cases, a definite diagnosis can be made if the laminated membrane, hooklets, or scolices are found in sputum. A characteristic x-ray picture of lung disease is produced by air, dissecting down along the adventia, producing a diagnostic dome-shaped cap of lessened density above the cyst.

In liver disease, the only positive diagnosis is thru exploratory operation and finding the daughter cysts containing scolices in the mass, as in the case presented below. However, one should suspect echinococcic liver cystic disease if the patient has a soft, non-tender mass with no clinical evidence of gastro-intestinal malignancy, and a history of being born or living in one of the foreign sheep-raising countries.

In foreign literature, one finds frequent references of spontaneous or traumatic rupture of cysts into the peritoneum (i.e., in football players) producing immediate death. Apparently the cyst fluid produces an anaphylactic shock reaction.

CASE PRESENTATION

M. S., age 50, was admitted to U. S. Marine Hospital, Stapleton, Staten Island, on January 8, 1946, complaining of "pain and swelling of stomach". He was born in Arabia and has been going to sea for 30 years. He left Arabia in 1920, to come to the United States. (For four years before that he shipped out of Arabian ports, to all European ports. He returned to his home in Iden, Arabia, in 1936, remaining two years. Since then he has been working as an oiler on ships running from New Orleans to Colon, Panama, and Honduras, Central America. For a 25-month period (1943-45) he worked on an Army transport stationed in the far East, Australia, New Zealand and Philippines.) He worked on a farm in Arabia for short periods of time between trips—(1916-20 and 1936-38).

His family and past history do not contribute anything to the history. Mother died in 1918 of

"flu" and he has two sisters living and apparently well in Arabia.

His present illness began about four years ago when he first noticed a lump in the right upper quadrant of his abdomen. This caused no discomfort, and he was able to continue with his regular work until two months before admission here, when he developed pain in the abdomen, which was made worse by climbing or straining. He had no gastro-intestinal symptoms. In fact, review of the system history was entirely negative except for slight anorexia for the past three or four months. He had no weight loss,—his usual weight 147 lbs.

Physical examination on admission here revealed an emaciated, slightly developed Arabian male, in no pain, and co-operative. The only positive findings was a mass in the abdomen, associated with the liver. The mass extended 8 cm. below the costal margin on the right, and beyond the midline on the left. It was impossible to separate it from the liver. The surface was irregular, soft, and at times almost fluctuant, and at other times quite firm. It was not tender. No lymphadenopathy was noted and no jaundice or varicosities over the abdomen were observed. His blood pressure was 108/72; pulse 72; temperature normal. His chest was clear.

Laboratory work revealed no abnormalities of blood; blood Kahn and Mazzini negative; RBC 5,300,000 with 16.8 gms. hg., WBC 5,500 with 59.% lymphocytes and no eosinophilia. Bleeding time 2 minutes, coagulation time 6 minutes. Icteric index 6. Stool culture revealed no pathogenic organisms and on stool examination no ova or parasites were found. Urinalysis revealed 100 mg. albumin.

X-rays, including gastro-intestinal barium studies, were reported as showing a markedly enlarged liver, producing considerable displacement of stomach and duodenum to right and posterior.

Chest x-ray revealed a homogeneous increased density just above the leaves of the diaphragm, extending upwards, which under fluoroscopy was shown to be directly continuous with the upper border of the diaphragm and probably due to the mass below. The x-ray impression was "large cyst of liver and lower lobes, left lung".

The pre-operative differential diagnosis was:

1. Echinococcic cyst of liver.
2. Metastatic carcinoma of the liver.
3. Primary liver malignancy (lymphosarcoma, Hodgkin's, etc.).

On February 4, 1946, the abdomen was explored*, revealing a tremendous mass on the inferior surface of the liver, extending backwards and to the left, in front of the stomach, along the quadrate lobe of the liver, to the left in front of the stomach, between it and the spleen; and then upwards, deep in the left side over the kidney and adrenals. The cyst was grey white in color, soft but tense. The abdomen was packed off and the mass aspirated, obtaining clear fluid and then collapsed daughter cysts. A cannula was then inserted into the cyst and 2% formalin injected. After about five minutes, the cyst was opened and over 1500 gms. of daughter cysts were removed. The mass must have contained over a gallon of fluid, altho there was no way of measuring it. The daughter cysts varied in size from a fraction of a millimeter to 6 cm. in diameter. Histologic examination of this fluid revealed numerous hooklets and scolices. The cyst was opened wider and a secondary communicating pocket on the left side drained. The edges of the cyst were then marsupialized to the skin in the mid line of the abdomen.

Following the operation, the patient ran a septic toxic course with a fever of 39.8, gradually returning to normal in 48 days. He continued to drain purulent matter in moderate amounts. The drainage contains no scolices or hooklets. (Pus contains B. Coli and streptococcus viridans).

Drainage gradually lessened and patient improved. X-rays revealed the pocket to still be present, but drainage is adequate and the opening is dependent.

The patient has been seen in outpatient clinic for frequent follow-up examinations during the past 1½ years. The pocket became progressively smaller and, after about one year, drainage stopped. He has returned to work, has gained weight. When last seen he had no palpable abdominal masses, and was asymptomatic. He has shown no signs of secondary hydatidosis.

SUMMARY

The epidemiology-pathology and treatment of echinococcic disease is discussed. A case of the disease, with large liver abscess is presented. At the present time the most important factor in the

*Exploratory operation performed by Dr. Louis R. Davidson.

disease is prevention: that is, eating only well-cooked food while visiting or living in endemic areas. If the disease develops, treatment is surgical, and consists of either excision of the cyst or drainage.

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Syrup of Urethane Dangerous!

The Federal Security Administration's Food and Drug Administration is making seizure of Syrup of Urethane. This is a cough syrup manufactured by Marvin R. Thompson, Inc., Stamford, Connecticut. Physicians, pharmacists, and consumers are warned that the administration of Urethane in the quantity recommended on the label may cause a dangerous lowering of the white blood cell count. This leaves the patient more liable to infection from disease germs. Individuals suffering from coughs are likely to have accompanying infections.

More than 2300 gallons of Syrup of Urethane have been distributed in about 34,000 packages ranging in size from ½ oz. physician's samples to one gallon bottles. The product has gone throughout the country to physicians, wholesale druggists, and retail pharmacists. When seizure actions were commenced the manufacturers started to recall Syrup of Urethane from the market. The manner and extent of distribution are such that neither the manufacturer nor federal, state, and local health offices will be able to locate all bottles promptly.

Use Smear Test to Diagnose Early Cancer.

Kidney cancer at a pre-growth stage has been detected by two cell experts using the diagnostic "smear" test for malignancy.

George N. Papanicolaou, M.D., developer of the smear test, and his co-worker, N. Chandler Foot, M.D., of the Cornell University Medical College Department of Anatomy, New York, say *J. A. M. A.*, Feb. 5, 1949, that they were able to identify the disease in a patient before the tiny cancer invaded surrounding tissue.

Cancer in this early stage, called cancer "in situ," often can be eradicated by prompt treatment. Because the microscopic tumor is not revealed by x-ray photographs, and because the urinary tract is inaccessible to direct examination, cancer in situ of the kidney has been almost impossible to diagnose.

Describing the smear test, Dr. Papanicolaou says: "Cells at the surface of the growth tend to be dislodged. A technique for collecting the cellular debris, smearing it upon glass slides, and staining it has been perfected so that various components may be studied."

The interpretation of the smear requires the services of a careful and discriminating cell specialist who has had experience in this field, Dr. Papanicolaou emphasizes.

After the kidney was removed, microscopic examination revealed small areas in which there was unmistakable evidence of cancerous change in the tissue, the physicians say, adding:

"For good results from surgery in the case of these highly malignant tumors, which have been found to be most refractory to surgical treatment, it is imperative that they be recognized and removed before they have become invasive and metastatic. In the past this has proved to be almost impossible."

XUM

SUBCUTANEOUS PLASMA INFUSION IN CONVALESCENT CHILDREN*

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In convalescence after debilitating diseases there are many children who have need for the restoration of tissue protein. Peters[1] states that negative nitrogen balance usually occurs during and following acute infectious processes. At the present time whole blood, plasma and amino acids are used extensively to allay this condition. Oral plasma has been given to prematures and found to be of some help[2]. Much valuable work has been done with parenteral administration of these substances[3]. Plasma and serum have been found to be most valuable in antibody transfer in children[4]. It has been our personal observation in a statistically insignificant series that intramuscular pooled plasma in three times the dosage was as valuable in immunization against rubeola on an open ward as was immune globulin. During and since the World War II all blood donors are questioned as to their ever having had jaundice, and those who have had the disease are rejected, thus eliminating a very real danger in the use of plasma[5].

Pooled plasma has the advantages that it can be stored indefinitely, involves no laboratory procedure such as cross-matching, and can be injected with the use of only a sterile needle and syringe.

Even to experienced pediatricians intravenous injection is a time consuming and worrisome procedure in babies and small children[6,7]. In several hospitals as well as our own, there has been a tendency to give plasma subcutaneously when a good vein was not present or when the veins needed to be saved for other purposes. In an attempt to evaluate the subcutaneous route, this work was proposed. We believe that proper perspective can only be had when the subcutaneous infusion of plasma is contrasted with the usual rapid intravenous route under similar controlled conditions.

*From the Department of Pediatrics, Medical College of Virginia.

PROCEDURE

Each patient selected was free from an acute condition; yet, each was in a debilitated state so that plasma injection was desirable. Every patient was apparently in good fluid balance when chosen. Each was between nine and twenty-nine months of age. The preceding diseases were infectious diarrhea, pertussis, bronchopneumonia, esophageal strictures, acute otitis media, improper feeding and severe upper respiratory infections. None was selected who had not been free from an elevation of temperature for at least three days. All previous signs and symptoms of dehydration had disappeared.

Subcutaneous injections were done with a long 20 needle with a 50 c.c. syringe. The plasma was inserted under the skin between the scapulae in the back.

A hemoglobin, hematocrit, and a serum protein determination were done five times. Two control tests were done, the blood for the first being taken 24 hours prior to the injection of the plasma, and the second just before the plasma injection. These values were averaged in obtaining the normal control levels. Blood for the tests following the plasma injection was taken four, eight, and twenty-four hours following the plasma administration. The hemoglobin determinations were done by one person with two Sahli-Hellige hemoglobinometers which were checked and found to have the same calibration. The hematocrit determinations were done on oxalated blood in Wintrobe tubes. One-tenth c.c. of balanced 0.8% potassium oxalate and 1.2% ammonium oxalate evaporated to dryness was used per 2.5 c.c. of blood. Hematocrit tubes were centrifuged for sixty minutes at 3,000 RPM. The majority of serum protein determinations were done by the Kagan falling drop proteinometer[8]. For comparative reasons a few were done by the Kjeldahl method, these agreeing very closely with the falling

drop method. Each recorded value represents the average of three determinations of the falling drop, none of which varied more than .06 grams.

Two series of cases were studied simultaneously. The procedures used were exactly the same in both except that the plasma was given subcutaneously alternating with the rapid intravenous route. The amount of plasma injected was always ten c.c. per pound of body weight. The blood for all determinations was obtained from the external jugular vein since it was felt that the use of a tourniquet would damage capillaries with resultant false values.

The results in the following charts are the averages of the work on twelve patients by the intravenous method and thirteen by the subcutaneous method. The work was begun on eighteen other cases by the subcutaneous route but it was discontinued because of inability to obtain all necessary blood samples.

DISCUSSIONS OF RESULTS

The results of these experiments are noted in the accompanying charts (Fig. 1 and 2). The values for the base lines are an average of two closely agreeing controls taken 24 hours apart.

In those patients receiving plasma subcutaneously the concentration of serum protein at the end of the four hour period was definitely elevated above the initial value. Although the actual protein concentration of the injected plasma was not determined in all cases it was probably no higher than the average protein level of the patients since it was diluted approximately fourteen per cent with sodium citrate in collecting the blood[9]. In determinations made on three samples of plasma, it varied from 6.05 to 6.35. The increase in plasma protein concentration during the first four hour period suggested that the injected plasma passed readily into the blood and that most of the excess fluid thus absorbed passed into the tissues, leaving the injected plasma proteins behind in the blood. It was of course probable that a considerable amount of the excess fluid may have been eliminated by way of the kidneys. However it was not practical to determine whether the rate of urine formation was increased following the insertion of the plasma. This passage of subcutaneously injected protein into the blood has been shown by Drinker to be by way of the lymphatics rather than by direct

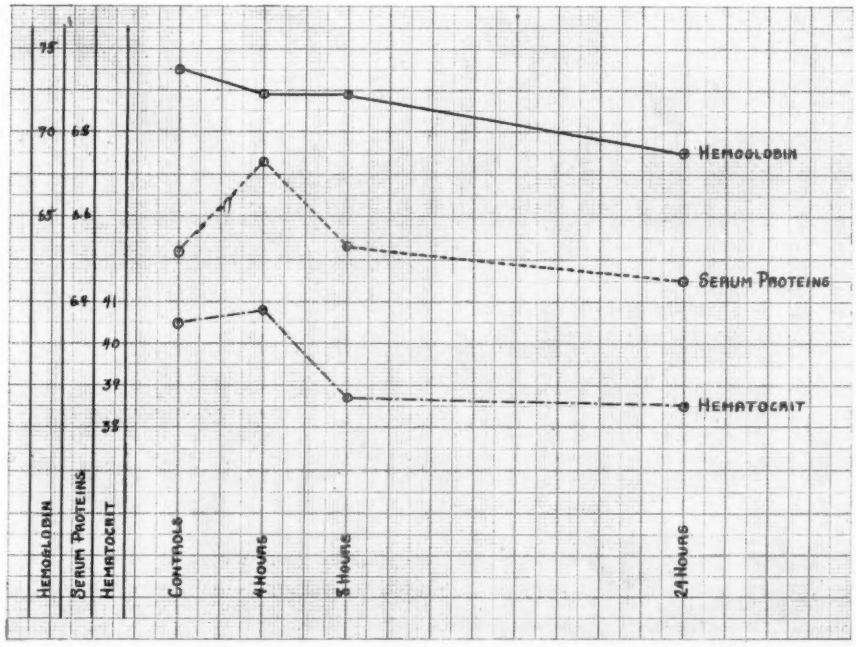

Fig. 1. Subcutaneous Administration of Plasma. Curves obtained when averages were made of the blood determinations in the thirteen convalescent children given subcutaneous plasma.

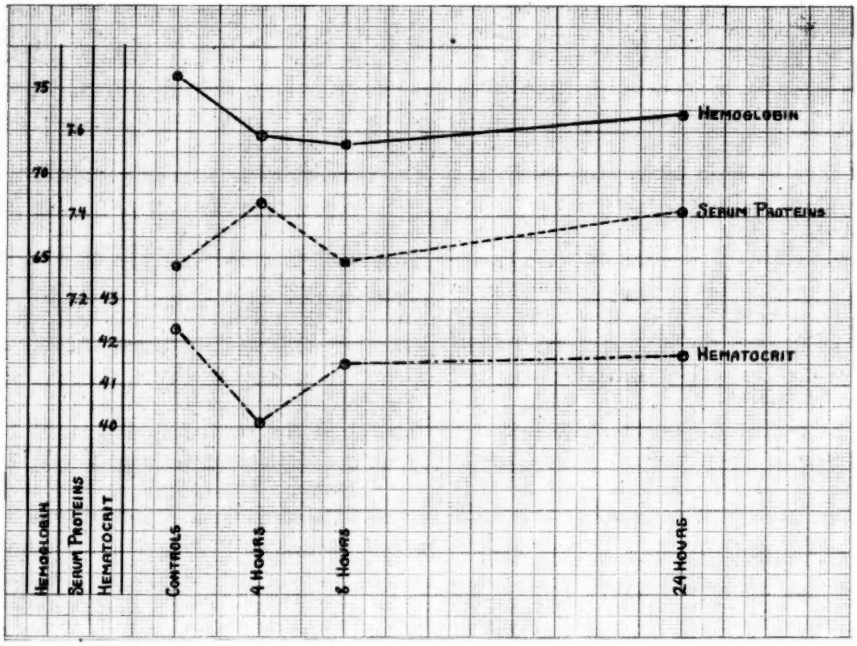

Fig. 2. Rapid Intravenous Administration of Plasma. Curves obtained when averages were made of the blood determinations in the twelve convalescent children given rapid intravenous plasma.

passage through the capillary walls[10,11,12].

Spence[13] has shown that changes in the electrolyte content of the plasma *in vivo* leads to measurable changes in cell volume, as may be noted in the slight difference between serum protein and hematocrit curves.

In the intravenous series also the serum protein was elevated at the end of the four hour period. By the eighth hour it had dropped approximately the initial value while in another sixteen hours it was equal to the four hour value. Our explanation was that the increased fluid pressure in the capillaries forced the plasma out into the tissues. Here the osmotic pressure was increased so that at the eight hour level, protein was drawn into the tissue space, and it was not reabsorbed for 16 hours. The hematocrit reading returned to nearly the initial value in 8 hours, this fact bearing out the increase in the tissue osmotic pressure[14,15].

When the final results obtained by the intravenous method are compared with those obtained by subcutaneous administration, it will be seen that they are quite different. If the plasma could be slowly injected intravenously it is probable that the results obtained would be more or less in line with those obtained from the subcutaneous route; however, it is hardly feasible to administer intravenous plasma slowly in the child. It should be noted that the amount of plasma injected was equal to approximately one half of the child's plasma volume. The plasma is usually injected in a period of fifteen minutes.

It was the clinical impression during these experiments that the patients receiving the plasma subcutaneously responded equally as well if not better than those receiving it intravenously. Rapid subcutaneous administration caused some sclerosing of the skin in two instances but this disappeared with no difficulty. The thickening of the skin in these areas would prevent subcutaneous injection being done daily, unless it were done slowly. It is therefore recommended that it be given slowly and only to patients with adequate skin surface. The thickening occurred in two of the series and disappeared with no treatment: the first in four days, the second in seven days. Rapid intravenous injection of plasma in a baby or a very young child is not without dangers[16,17,18].

The nature of the procedure is such that the fluid has to be rapidly pumped in, the time taken to give

it being only a small part of the time required for an adult intravenous infusion[3,4]. Several instances have been observed in this hospital in which an infant after receiving whole blood or plasma intravenously became cyanotic and dysneic, requiring artificial respiration and stimulants. We have never noted a prolonged untoward reaction from subcutaneous injection of plasma in the three year period we have used it. The trauma to the child is no greater by the slower subcutaneous method since he is stuck only one or two times while several punctures are necessary at times to give intravenous fluids; also the child does not have to be as uncomfortably restrained when plasma is given by the subcutaneous route. The circulatory system is not as overloaded as when administering in a very short time an amount equal to nearly fifty per cent of the plasma volume.

SUMMARY

1. Two series of convalescent children, ages 9 to 29 months, are presented: twelve cases receiving 10 c.c. of plasma per pound of body weight intravenously, and thirteen cases receiving 10 c.c. of plasma per pound body weight subcutaneously.

2. Hemoglobin, serum protein concentrations, and hematocrit determinations were done before and after the plasma was injected.

3. The results suggest that plasma proteins pass readily into the blood after their subcutaneous administration, and it is felt that when there is no emergency the subcutaneous route of plasma administration is as efficacious as the more difficult intravenous route in infants and very small children.

4. We suggest the subcutaneous route since clinically the children respond as well, the infusion dangers are greatly lessened, and less specialized equipment and skill are required.

The authors wish to acknowledge the assistance given this study by Miss Patterson of the Department of Research Chemistry, Dr. Harry Spence, and Dr. Benjamin Kagan.

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XUM

OVARIAN AGENESIS (TURNER'S SYNDROME) REPORT OF A CASE WITH POST MORTEM FINDINGS

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Only one post-mortem examination of ovarian agenesis has been reported in the American literature[5]. It is the purpose of this paper to report the significant pathological findings in a patient who had this syndrome and who died of typhoid fever.

The clinical aspects of a syndrome in women characterized by initial amenorrhea, hypoplasia of uterus and vagina, hypoplasia of breasts, shortened stature, scanty axillary and pubic hair, retarded osseous development, increased urinary excretion of gonadotropins, decreased urinary excretion of estrogens, androgens, and 17-ketosteroids, normal basal metabolic rate, normal insulin tolerance test, normal water diuresis test, osteoporosis, and the association of multiple congenital defects has been described in detail in the American literature by several authors[1-4]. The congenital defects most commonly noted are cubitus valgus, webbing of the neck, multiple pigmented nevi, visual defects, coarctation of the aorta, mental deficiency, deafness, syndactylism, scoliosis, and the shortening of one or more digits. It has been shown by autopsy examination[3,5] and by exploratory laparotomy[2,3] that the fundamental anatomical defect of the endocrine system in this syndrome is a failure of development of the fetal ovaries.

CASE REPORT

Mrs. H. D. was a 26 year old white woman who was admitted to the University of Virginia Hospital on October 8, 1947, with a four week history of the gradual onset of malaise, weakness, drowsiness, generalized aching, chills, fever, anorexia, nausea, vomiting, diarrhea, epistaxis, and progressive deafness. Her next door neighbor and her sister were under treatment in this hospital for typhoid fever. The rest of her family history was non-contributory. She was the oldest of five children, and had always been smaller than the other children her age. Except for nocturia since infancy and mumps at the age of 10 years, she had always been in good health. She had never had any mammary development, or cyclic uterine bleeding. An episode of scanty vaginal bleeding at the age of 14 years was apparently due to trauma. A sparse amount of pubic hair appeared during her teen-years, but she did not remember the exact date. She stopped growing in her late teens. At the age of 22 years she was married and apparently had no difficulty with sexual relations. However, intercourse was infrequent and was not enjoyable to the patient. She had never had any endocrine treatment.

Physical Examination: Temperature 103.6°. Pulse rate 128. Respirations 26. Blood pressure 124/80. Height 58 inches. Weight 85 pounds. The patient was a small, but well proportioned, drowsy young woman appearing to be seriously ill, and apparently about ten years younger than her stated age. She was slightly deaf and her voice was high pitched. The skin was pale, hot and dry, but the cheeks were flushed. There were many pigmented nevi scattered over the skin. There was a fold of skin extending from the mastoid region to the acromial process on the right. This did not interfere with the motion of the head. The carrying angle at the elbows was slightly increased. The pubic hair was sparse and confined to the labia and the center of the mons pubis. Only one or two strands of hair were present in each axilla. The breasts were flat, but the nipples were slightly protuberant. The mouth was dry and the tongue coated. The chest was clear. The heart was normal except for a soft blowing systolic murmur heard at the apex. The spleen and liver were both enlarged and palpable. The external genitalia were hypoplastic. The vagina was smaller and less elastic than normal. The uterus was small and of juvenile proportions. No ovaries or other masses could be palpated in the adnexal regions.

Laboratory Studies: Urinalysis was negative. Red blood count was 3.5 million. Hemoglobin was 10

grams per 100 cc. White blood count was 3,000. Wassermann test was negative. Repeated stool and urine cultures were negative for typhoid organisms. A positive culture for Eberthella typhosus was obtained from the blood on admission and gall bladder bile at autopsy. Widal agglutination was positive for E. typhosus. Cerebrospinal fluid was normal. Blood chemistry determinations, including calcium, phosphorus and phosphatase, were normal.

Course In Hospital: A diagnosis of typhoid fever was made and the patient was given the usual symptomatic treatment. She gradually became weaker and on the ninth hospital day started having convulsions. The following day she died in an attack of acute pulmonary edema.

Clinical Diagnosis: 1. Typhoid fever, with death due to pulmonary edema. 2. Ovarian agenesis, dwarfism, cubitus valgus, and webbed neck (Turner's syndrome).

AUTOPSY REPORT

Gross Description: The peculiar external abnormalities as noted in the physical examination were confirmed at autopsy.

Body cavities: Each pleural cavity contained 200 cc. clear yellow fluid. The pericardial cavity contained 50 cc. clear yellow fluid.

Cardiovascular system: Heart weighed 235 gms. and showed no abnormalities. The coronary arteries and the lower aorta showed surprisingly marked arteriosclerosis.

Lungs: Both lungs showed marked edema.

Liver: Weight 1925 gms. A few minute grey areas of necrosis were scattered throughout the parenchyma.

Spleen: Weight 440 gms. The soft red pulp consistent with acute splenic tumor was found.

Kidneys: The right kidney was absent. The left kidney weighed 325 gms. and from the inferior portion a ureter descended to the right side of the bladder. A second ureter ran from the superior portion of the kidney, crossing anteriorly to the first ureter, to the left side of the bladder. There were four arteries from the aorta to the kidney. A very large vein extended from the inferior portion of the kidney to the vena cava.

Adrenal glands: The left adrenal was in its normal anatomical position above the large left kidney and weighed 11 gms. The right adrenal was in the normal position and weighed 7.3 gms. The cortex of the adrenals measured only 1 mm. in thickness and was bright yellow.

Gastrointestinal tract: There were green elevated ulcers on either side of the ileocecal valve. This ulceration was more marked in the ileum. The mesenteric lymph nodes were greatly enlarged.

Pelvic organs: The uterus measured 6 x 4 x 2 cm. and the cervix made up about half the mass. No ovaries could be located. The Fallopian tubes and the vagina were small.

Endocrine glands: The pancreas, thyroid, parathyroids, and pituitary glands were grossly normal. The thymus and pineal were small.

Bone marrow: Bone marrow from the middle third of the femur was red and cellular.

Brain: The superficial blood vessels of the brain were engorged with blood, and the convolutions of the cerebral cortex were slightly swollen.

Microscopic Examination: Changes typical of typhoid fever were found in the organs of the body and will not be described.

Vagina: The vaginal epithelium showed moderate cornification with an average thickness of six cells.

Uterus: The endometrium was hypoplastic, but had a few scattered small endometrial glands (Fig. 1.) The Fallopian tubes were immature, and no ovarian tissue was demonstrated in sections of the adnexal regions (Fig. 2.).

Endocrine glands: There was slight atrophy of the pancreas, but the islet tissues were normal. There was lipid vacuolization of the zona glomerulosa of the adrenal cortex. The remainder of the adrenal was extremely congested and showed small hemorrhages. The thyroid gland was composed of well filled follicles lined with cuboidal epithelium. The parathyroids were normal. The thymus showed involution and some of the Hassall corpuscles were calcified. Many pigmented cells were present in the pineal body, but it was apparently normal.

Pituitary gland: The pituitary gland was cut sagitally and serial sections were made of one-half the gland. Sections at 200 microns intervals were stained by the Picro-Mallory Method I as outlined by McFarlane[6]. Counts were made of cells in representative areas of the sections with the following results: acidophiles 55%, chromophobes 43%, and basophiles 2%. 2740 cells were counted. Included as acidophilic cells were a large number of moderately sized yellow-red cells containing indistinct

granules in their cytoplasm. These cells tended to be concentrated in the center of the pars anterior, while the more typical acidophilic cells with marked granulation occurred predominantly about the periphery of the gland.

Anatomical Diagnosis: Primary ovarian agenesis; absence of ovaries, immaturity of genitalia and breasts, shortened stature, sparse pubic and axillary hair, cubitus valgus, webbed neck, congenital anomaly of kidneys, acidophilia of pituitary. Typhoid fever; intestinal ulceration in ileo-cecal area, mesenteric lymph node hyperplasia, acute splenic tumor, minute areas of necrosis in spleen and liver, hyperplasia of bone marrow, Zenker's degeneration of striated muscles. Pulmonary edema.

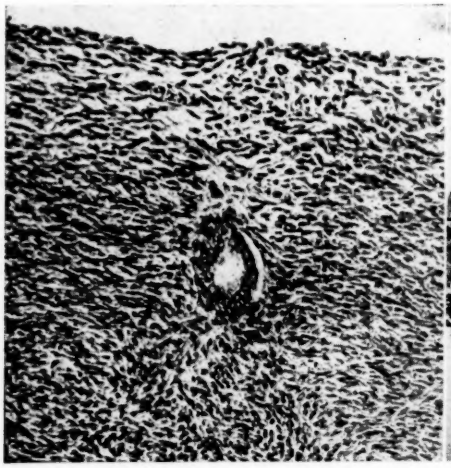

Fig. 1. Section through uterine wall showing marked hypoplasia of the endometrium.

Fig 2. Cross section of adnexa at the site of greatest thickening showing the absence of ovarian tissue.

DISCUSSION

The fundamental defect of the endocrine system in this syndrome is a congenital absence or failure of development of the ovaries[3]. In this patient no ovarian tissue could be found even though a careful search was made for aberrant ovaries. The thyroid gland, pancreas, thymus, and the pineal body were all normal. The changes in the pituitary were thought to be secondary to the absence of the ovaries. The changes in the adrenal were attributed to the typhoid fever.

In the absence of sufficient estrogens in the blood, the anterior lobe of the pituitary is stimulated to secrete an excessive amount of follicle stimulating gonadotropic hormone[4]. This results in an excessive amount of the gonadotropic hormone being excreted in the urine and gives us our most valuable single laboratory aid in the diagnosis of this syndrome[2-3]. There is still some difference of opinion as to whether this hormone is secreted by the eosinophilic or the basophilic cells of the pituitary. Autopsy examination of our patient, as well as of four previously reported patients[3] showed definite evidence of eosinophilic hyperplasia of the anterior lobe of the pituitary gland.

Because of the decreased excretion of 17-ketosteroids, which has been repeatedly reported in this syndrome[2-4], we examined the adrenals very carefully. The adrenal cortex did seem to be a little thinner than normal, but we were forced to conclude that no significant abnormality was demonstrable.

The cause of the adrenal cortical hypofunction in this syndrome is unknown. Albright[2] has attributed it to the fact that no estrogen is present to stimulate the pituitary to secrete luteotropic gonadotropic hormone which in turn stimulates the adrenal cortex. Hamblen[4] has suggested that since the ovary and the adrenal cortex have a common embryological primordium, a congenital disturbance of one would likely be associated with a congenital disturbance of the other. A direct correlation between the level of 17-ketosteroid excretion and the amount of pubic and axillary hair has been demonstrated[4]. Since this patient had a sparse amount of pubic hair and only a few strands of axillary hair, it is probable that her 17-ketosteroid excretion was reduced.

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Attempts to explain the shortened stature on an endocrine basis have not been entirely satisfactory. Dwarfism may result either from a reduced rate of growth or from a premature cessation of growth. Since there is a delayed closure of the epiphyses[2] in this syndrome it is obvious that the growth period is not shortened. Some of the reported patients give a history of having been small at birth, and the vast majority have shown a retarded rate of growth throughout childhood[1-4]. Our patient had always been smaller than the other children of her same age. The fact that the administration of pituitary, thyroid, ovarian, testicular, and adrenal hormones has been tried, by numerous investigators, in varying dosage schedules without significant effect upon the height, is further evidence that the short stature is on a genetic rather than on an endocrine basis. Our patient was 58 inches tall, or 3 inches above the median height of those reported in the literature. As a general rule these patients range in height from 50 to 60 inches, but taller patients have been reported[3].

Estrogen administration to these patients results in uterine growth, vaginal cornification, and pigmentation and growth of the nipples. If the estrogens are administered cyclically it is possible to induce cyclic uterine bleeding. If progesterone is added during the later part of the course of estrogen treatment a progestational endometrium may be produced[4]. Thus it can be seen that the hypoplasia of the genitalia is on an endocrine rather than on a genetic basis. Unfortunately, the response of the breasts to substitution therapy is not always predictable and is generally disappointing. As a rule the growth is confined to the nipples and collecting ducts with little effect upon the parenchyma of the breasts[4]. Variations in the methods of administration may result in better cosmetic effects.

No satisfactory explanation has been offered for the frequent association of cubitus valgus, webbed neck, and other congenital anomalies with ovarian agenesis. It would seem likely that these multiple defects are the result of a severe metabolic process which affects the fetus during the second month. The information regarding the prenatal life of this, as well as of other patients, has been too scanty to permit any conclusions to be drawn. However, the possibility of the mother having had some infectious disease during the prenatal life of these patients warrants further investigation.

The osteoporosis found in so many of these patients has been compared to the osteoporosis in postmenopausal women, and attributed to the absence of estrogens by Albright[2]. That the osteoporosis is not related to hyperplasia of the parathyroid glands is indicated by the normal levels for serum calcium, phosphorus, and phosphotase, and also by the normal parathyroid glands found at autopsy in this and other patients.

Panhypopituitarism and severe chronic constitutional disease are the two other conditions which commonly cause statural and sexual retardation. In panhypopituitarism the stature is dwarfed, the pubic and axillary hair is absent, the patient is thin and weak, the bone age is markedly retarded and often the epiphyses never completely fuse, gonadotropic substances are absent from the urine, the excretion of 17-ketosteroids is markedly reduced, the basal metabolic rate is very low, the sensitivity to insulin is increased, the glucose tolerance curve is flat, and congenital anomalies are rare[2]. In severe constitutional disease there is a secondary depression of the endocrine glands that is generalized and incomplete. The constitutional disease is usually obvious.

SUMMARY

1. A case of ovarian agenesis proven by postmortem examination is reported. This is the second such case to be reported in the American literature with autopsy findings, even though there have been over seventy cases reported with clinical findings.

2. This patient presented the classical features of Turner's syndrome, namely: short stature, sexual infantilism, cubitus valgus, webbed neck, other congenital anomalies, and general good health.

3. At autopsy she was found to have no ovarian tissue, hypoplastic internal genitalia, a fused double kidney on the left side, and eosinophilic hyperplasia of the anterior lobe of the pituitary gland. The other endocrine glands were normal. She died of typhoid fever and presented the typical findings of that disease.

4. This syndrome is not uncommon and is frequently confused with hypofunction of the pituitary gland. The two conditions can be readily differentiated by clinical means.

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Addendum: Since this was submitted an additional autopsy examination has been reported by Atria, A., Sanz, R., and Donoso, S.: Necropsy Study of a Case of Turner's Syndrome. *J. Clin. Endocrinol.* **8**:397-405 (May, 1948).

Antivivisectionists Danger to Medical Progress.

Walter C. Kraatz, Ph.D., head of the department of zoology, University of Akron, Akron, Ohio, in an article in *Hygeia*, points out that antivivisectionists, who tried to sabotage research that saved thousands of lives during World War II, have been increasing their funds and activity since the war.

"Thousands of soldiers who would have died horrible deaths during World War II owe their lives to achievements made possible by experimentation on a relatively small number of dogs and other animals", Dr. Kraatz asserts.

"The discovery of how to use penicillin to prevent infection of a brain wound, the tantalum sheaths that allowed shattered nerves to heal where bullets had smashed delicate tissues, the metal plate which formed beneficent, permanent shields over great holes in the skull—these achievements and many others were worked out during the war by experimentation on animals.

"The work was brought to completion in secrecy in laboratories, secrecy necessary to preclude sabotage by antivivisection fanatics."

All bona fide laboratories of medical research abide by the strictest rules of humane treatment of animals and are open to inspection by qualified persons such as humane society officers, Dr. Kraatz emphasizes, adding: "Antivivisectionists might well turn in the direction of condemning deaths of animals caught in steel traps, where many lacerated animals starve to death."

Middle Age Affects Eyesight.

The effects of middle age on eyesight become increasingly important as people over 40 represent a larger part of the total population, Dr. Edwin B. Dunphy of Boston told the 40th Anniversary Conference of the National Society for the Prevention of Blindness in New York on March 16th. He said that in the past fifty years people over 45 years of age had risen from 17% to 26% of the total U. S. population. This age group is expected to reach 40% by 1980, he reported.

He said that glaucoma is the most serious eye problem of middle age and that cataract is next most important and early symptoms of cataract are often confused with those of glaucoma. He emphasized the importance of maintaining cataract patients' morale by stressing the fact that 95% of cases are curable by surgery.

"The most annoying and most universal inconvenience of middle age is presbyopia", Dr. Dunphy said. This is the reduced ability of the eye to accommodate itself to different focal distances and light intensities. He said presbyopia is due more to lack of elasticity of the lens itself than to weakness of the ciliary muscle, which contracts the lens.

THE CANCER COMMITTEE
MEDICAL SOCIETY OF VIRGINIA

Case Reports

During treatment for another condition, a physician discovered a small, smooth, firm, movable mass in the left breast of a 36 year old negro woman. His impression was fibroadenoma. He advised biopsy but the patient refused. A year and a half later, the patient saw the same physician again. He noted that the mass had enlarged moderately and urged biopsy. Again the patient refused. Fifteen months later (in January, 1949), she returned with a huge, ulcerating, bleeding carcinoma of the breast fixed to the chest wall and with multiple metastases to the axillary nodes. The immediate response to X-ray therapy was excellent.

An almost identical case history was reported recently from another tumor clinic in the State. A middle-aged white woman entered the hospital for biopsy of a freshly discovered mass in the breast. Becoming angry with a nurse over some fancied slight, she left the hospital before anything was done. When she finally returned some eleven months later, the entire breast was stony hard, brawny and attached to the chest wall. Half of the breast surface was occupied by a foul, necrotic, bleeding ulcer; the axilla was full of metastases and chest X-ray showed pulmonary metastases. The immediate response to X-ray administered in December, 1948, has been good.

COMMENT: In spite of the best efforts of the physicians attending them, these two women refused treatment when they had a 75 per cent chance of complete cure and have condemned themselves to certain death from breast cancer in the not very distant future. As everyone who treats much cancer knows, many people lose their lives each year because they have not been convinced of the danger from cancer. Many others allow their chance for cure to slip by because they have not learned to be alarmed by the minor symptoms that may mean early cancer. Others postpone seeking medical advice, though they suspect they have cancer, because they believe all cancer is hopeless.

We can never reduce the cancer death rate significantly until we have more successfully taught the public the facts about cancer. We can cure cancer only if the patients present themselves in an early stage of their disease. Every thinking physician will support and contribute to efforts to teach laymen the wisdom of periodic physical examination, the symptomatology of early cancer, the importance of early recognition of the disease, and the constantly improving cure rates.

A 42 year old white woman discovered a small mass in her right breast and immediately consulted her family physician. He confirmed the presence of a mass but advised that she watch it and return if it grew larger. She returned a month later, during which time the mass in the right breast had grown larger and a mass had developed in the left breast. Two weeks later, she was referred to a surgeon whose only pertinent positive findings were the two hard, movable lumps, the right one measuring 3 x 2 cm., the left one 1.5 cm. His impression was bilateral fibroadenomata. His advice was immediate bilateral excision of the masses for pathological study. This procedure was carried out two days later. The pathologist's report on the frozen section of the tumor in the left breast was benign fibroadenoma, but of the tumor in the right breast, adenocarcinoma. The surgeon proceeded at once with a right radical mastectomy. The axillary glands showed no tumor cells.

COMMENT: A mass in the breast constitutes an emergency demanding immediate investigation. The right radical mastectomy could and should have been done six weeks sooner. Nevertheless, the patient has an excellent chance for cure.

XUM

PUBLIC HEALTH

L. J. ROPER, M.D.,
State Health Commissioner of Virginia.

The report of the Bureau of Communicable Diseases of the State Department of Health for February 1949 as compared with the same month in 1948, and for the period of January through February 1949 compared with the same period in 1948, is as follows:

	Feb. 1949	Feb. 1948	Jan.-Feb. 1949	Jan.-Feb. 1948
Typhoid and paratyphoid	5	9	7	19
Diarrhea and Dysentery	360	352	706	596
Measles	3,573	416	5,936	1,171
Scarlet fever	103	83	166	230
Diphtheria	20	12	33	49
Poliomyelitis	3	2	8	3
Meningitis	10	9	19	18
Undulant fever	5	7	9	14
Rocky Mountain spotted fever	0	0	0	0
Tularemia	2	1	5	18

INFLUENZA

For years the feeling has been widespread among physicians and public health workers that the world was due for another pandemic of influenza similar to the one occurring in 1918. At unpredictable intervals such waves have swept through the world, and are the most devastating of all modern plagues. The pandemic of 1918 was accompanied by a death rate which far exceeded the war casualties of all nations involved in World War I.

In the pandemic of 1936-37 the virus was widely distributed and the attack rate comparable to that of 1918, but the number of deaths was relatively small and little public apprehension was aroused. It is the wave of 1918 that is remembered with the associated feeling of panic. The reason for the variation in the virulence of virus strains constitutes one of the unsolved problems of infectious diseases.

With this in mind, in the Fall of 1948, the Surgeons General of the Army, Navy, Air Forces and Public Health Service, developed a plan for the establishment of an Influenza Information Center at the National Institutes of Health at Bethesda, Maryland. This center administers in this country the World Health Organization Influenza Program whose aim is the protection of the people of the world from a pandemic of influenza as last experienced in 1918. The Information Center collects information as to the occurrence of an outbreak of suspected influenza and aids in the isolation of the virus as a means of determining the prevailing strains for use in the production of vaccine. Local health departments and the physicians of the State have a definite part to play in this program, since it is they who first will have knowledge of local outbreaks of suspected influenza.

Fortunately these facilities have not had extensive use at the present writing. Although there have been reports of increased numbers of cases on the Continent of Europe, the condition has not become pandemic, nor does it appear likely to do so. Allowing for exceptions to the rule, the peak incidence of influenza usually comes in late December, January and February. It is, therefore, reassuring to note that the number of cases of influenza reported in the United States March 2nd had dropped in three successive weeks. In the four weeks ending February 26th, the incidence of reported cases was one-half of the median for the years 1944-48. And so, though in preventive medicine we can never imperil our health security by lack of vigilance, we can feel a sense of relief for the present at least.

The efficacy of vaccines containing influenza virus has been investigated since 1936 (Chenoweth). Horsfall in 1941 showed that the subcutaneous injection of virus vaccine led to a significant reduction in the incidence of influenza A. During the epidemic of influenza A the incidence of the disease was about 75% lower in vaccinated than in unvaccinated persons. The disappointing feature is the temporary nature of the immunity gained through such vaccination. Following subcutaneous administration of influenza vaccine, antibodies begin to appear in approximately a week, reach maximum levels during the second week, remain constant for a month and then gradually decline (Hirst 1942). There is no agreement as to the duration of immunity following vaccination, estimates varying from two to twelve months.

From the viewpoint of epidemiology, treatment, and control, we must remain vigilant that we may marshal our forces at the first evidence of invasion.

MEDICAL SOCIETY OF VIRGINIA
THE COUNCIL

March 4, 1949

The Council of the Society held its winter meeting on March 4, 1949, at the Society's office in Richmond, with the president, Dr. M. Pierce Rucker, presiding. Others attending were: Dr. Charles Outland, vice-president; Drs. R. B. Bowles, C. L. Harrell, Guy W. Horsley, W. J. Ozlin, J. T. T. Hundley, R. P. Bell, Jr., V. W. Archer and James P. King, councilors; Dr. L. J. Roper, State Health Commissioner; Dr. Ennion S. Williams, associate editor; Drs. J. M. Hutcheson and H. B. Mulholland, American Medical Association delegates; Dr. J. M. Emmett, chairman, committee on Public Relations, and Mr. Henry S. Johnson, director.

Motion was made that the Council dispense with reading of minutes of its last meeting, which related to the special assessment by the American Medical Association for its National Educational Campaign. Dr. Rucker stated that the Society has the machinery in its Public Relations Department for carrying on the program and he was naming Dr. Hundley as State Chairman. Asked if he had a statement to make, Dr. Hundley said he had worked out no details at this time, but gave the following contemplated steps worked out at a meeting of the Public Relations Committee the evening before:

1. Push collection of AMA assessment.
2. Use of existing organization with
   a. State Chairman
   b. Public Relations office
   c. Executive Secretary and state officers
   d. Councilors
   e. District Councilors
   f. Local society officers and committees
3. Possible replacement of inactive personnel in district councils where necessary or advisable.
4. Publicity and educational material to be available through and distributed by the Public Relations Office.
5. Immediate creation of a speakers' bureau of both medical and lay persons to address various groups and organizations.
6. Active and close cooperation with and utilization of the Woman's Auxiliary.

Dr. Horsley asked what should be done about members of district councils who showed no special interest in the work. Dr. Emmett replied that he thought each councilor could better evaluate the services of the district councilors and he felt each councilor should appoint these as he sees fit.

Dr. Emmett then presented the following report from the Public Relations Committee:

In view of the grave situation with which we seem to be faced, several things seem to be indicated:

1. Members of the Medical Society of Virginia may need to be alerted to an all out effort on the part of the medical profession and to engage the efforts of other professions, business, civic groups, etc., if our point of view is to be understood, shared, and effective in the 81st Congress. One possible approach to this might be a resolution from the Council to each local medical society, recommending more frequent meetings than are normally scheduled by local societies.
2. At least one meeting devoted to a discussion of the Socio-economic aspects of medicine with particular reference to compulsory health insurance, to which meeting a cross-section of respective lay-leadership is invited (if such has not been done).
3. Set up the necessary machinery to cooperate with the efforts of our state medical society under the direction of our state educational campaign director.
4. To embark upon a program of education of the individual membership of the society and engage his assistance in the campaign.
5. The creation (if one does not already exist) of a local "grievance committee" to handle all criticisms of members of the respective medical societies.
6. Create a grievance appeal committee in the Medical Society of Virginia to which matters of this nature may be referred by similar committees of the local medical societies in case an appeal is desired or in case local grievance committees fail to function.

The Committee then offered the following motion:

1. That there be constituted a Grievance Committee of the Medical Society of Virginia.
2. This Committee is to consist of five members to be appointed by the president.
3. The duties of the Grievance Committee will be the investigation of complaints of improper, unethical, or unfair practice of medicine, or of overcharging. It is contemplated that the Grievance Committee of the Medical Society of Virginia will act mainly on those cases appealed from the decisions of a similar committee of a constituent society, but if there is no corresponding committee of a constituent society, the Grievance Committee of the Medical Society of Virginia is empowered to act. Complaints may originate from either members of the medical profession or the lay public.
4. The Grievance Committee shall be authorized to publish rules of procedure.
5. Decisions of the Grievance Committee shall be given to the complainant, the defendant, and to the Council of the Medical Society of Virginia.

After discussion, it was moved and carried that a committee of three be appointed by the President to in-

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corporate these suggestions into an appropriate resolution to be presented to the Council after lunch. The President appointed Drs. Hundley, Williams and King.

Recess was then taken for lunch.

Resuming business, it was stated the Society had received a bill from the Middle Atlantic States Regional Conference on Medical Service for a contribution of $150.00 but the secretary advised that this had not been included in the budget as the Society was not called on for it last year. It was moved and carried that this amount be paid out of the treasury and Dr. Archer felt it should be included in next year's budget as it was a recurrent item.

Dr. Hundley presented the following resolutions prepared by the committee of three:

The Council of the Medical Society of Virginia in meeting 4th of March, 1949, recommends to each component society in order to arouse enthusiasm and direct effort toward effective mobilization of public opinion to the dangers of current trends in the regimentation of American life and the practice of medicine that:

1. The county societies consider the advisability of more frequent meetings;
2. That at least one meeting each year be devoted to a discussion of medical public relations activities, to which meetings prominent citizens, civic leaders and press representatives be invited; and
3. That increased efforts be made to inform the individual society members of the dangers of the medical proposals and legislation now under consideration of Congress.

Be it further recommended that each constituent medical society appoint a Grievance Committee to investigate complaints relating to unfair practices or instances of overcharging, whether these complaints originate within the profession or from the lay public. This committee will function on the local level and appeals to a similar committee of the Medical Society of Virginia will be available in instances where local adjustments cannot be effected satisfactorily.

It was moved and carried that these be adopted and the secretary was instructed to send a copy to each society and councilor.

A letter was presented from Dr. Louis H. Bauer, secretary-treasurer of the World Medical Association, inviting this Society to become a Founder-Sustaining member and to contribute for its support an amount in proportion to its membership and financial status. Offer was also made to send a speaker to the next meeting who might speak on this subject for 15-20 minutes. After discussion, it was moved by Dr. Hundley, seconded by Dr. Archer, to table this letter but to offer the Association an opportunity to have a speaker appear before a general session of the next meeting of the Society.

Dr. Rucker said Dr. Lull had advised that on the basis of its membership on December 1, 1948, the Society is entitled to three delegates in the House of Delegates of the American Medical Association for 1949 and asked if the members had any suggestions. Dr. Harrell moved that this be left to the President but that he might consult with the present delegates and Dr. Walter Martin, who is a member of the A.M.A. Board of Trustees. This raised the question about paying the third delegate's expenses in attending sessions of the Association, as provision had not been made for this in the budget. It was moved, seconded and carried that the same amount be allowed for the new delegate as for each of the others.

The Virginia Advisory Legislative Council was authorized by the 1948 General Assembly of Virginia to make a thorough and complete study of the provisions of the insurance laws of the State, and the Society was among the organizations asked to write out any suggestions to present to the committee in charge. Dr. Harrell said that hospital insurance will not pay for tuberculous patients and, when people take out hospital insurance they do not know what kind of sickness they will have. It was thought the committee was not referring to this kind of insurance but it was suggested that the letter be turned over to the Legislative Committee.

Upon request of Dr. Emmett, Dr. Caudill, president-elect, who was in Florida, had written with regard to holding the 1950 meeting of the Society at White Sulphur Springs, West Virginia. This suggestion was tabled, to be brought up at the annual meeting.

Several letters with regard to medical care and hospitalization and one from the Tennessee State Medical Association concerning medical and hospital benefits for veterans were ordered to be acknowledged and referred to the Public Relations Department.

Dr. Elmer Hess, chairman of the American Medical Association Committee on Hospitals and the Practice of Medicine, had written with regard to creating a standing committee on Hospital Relations for the purpose of attempting to iron out any controversies which might occur in the state concerning the practice of medicine and hospitals. After discussion, Dr. Archer moved, seconded by Dr. Harrell, that this be tabled.

Dr. Rucker told of a nurse recruitment campaign adopted by North Carolina which had proved successful in that state and this news release was referred to the Virginia State Nurse Association.

Dr. Dickinson of the Bureau of Medical Economic Research of the American Medical Association had asked if the Society had adopted resolutions concerning fees for life insurance examinations and attending physician's statement. No resolution had been adopted by the Society and Dr. Williams said the Life Insurance Company of Virginia had adopted none.

A letter was presented from Dr. J. R. Kight in which a recommendation was presented from the Department of Gynecology and Obstetrics of DePaul Hospital, Norfolk, that a state law be passed requiring all obstetric cases to have serologic tests performed and that such tests be required for the filing of a birth certificate, similar to

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the present prerequisite of premarital blood tests for a marriage license certificate. This was ordered referred to the Legislative Committee.

A report was presented from the Committee on Rebates of the American Medical Association, and it was felt this could be handled through the local societies with the assistance of the Ethics Committee.

Dr. Rucker said Dr. E. G. Gill of Roanoke, had written him, suggesting the appointment of a committee on Conservation of Sight and Prevention of Blindness and he had replied that he would bring this suggestion before the Council. Motion was made by Dr. Archer, seconded by Dr. Harrell, that the president appoint such a committee.

Under new business, Dr. Hutcheson offered the following motion: That a questionnaire be sent to each gubernatorial candidate concerning his views on compulsory health insurance on the plan now proposed in Washington, and that replies be made accessible to doctors throughout the state. This was adopted and referred to the chairman of the Public Relations Committee to be sent out over his name.

Dr. Archer said he had just talked to Mr. Christensen with Advertising Displays and Decorations, who had set up the scientific exhibits last year, and for this year he had given a price of $1,500.00 which was $300.00 in excess of the committee's budget, and he wished the Council to advise him what to do. He felt that the exhibits last year were excellent and doctors generally seemed pleased with the set up. Dr. Harrell moved that this item in the budget be increased to $1,600.00 so as to allow an additional $100.00 for incidental expenses. This was seconded and carried.

The secretary was instructed to ask Dr. Lawrence, Washington representative of the American Medical Association, to put the names of all the councilors on his mailing list to receive data he sends out.

It was stated that Dr. Hundley would have some expenses in connection with his work as chairman of the National Educational Campaign for the State and it was decided he should be reimbursed out of the Public Relations Department budget.

Dr. Rucker said he would like for Drs. Horsley and Porter to serve as the Finance Committee and prepare the budget for the annual meeting.

Adjournment followed.

AGNES V. EDWARDS,
Secretary.

Approved:
M. PIERCE RUCKER,
President.

The Grievance Committee appointed by Dr. Rucker is composed of Dr. J. M. Emmett, Chairman, Dr. W. L. Powell, Dr. Guy R. Fisher, Dr. H. B. Mulholland, and Dr. Roshier W. Miller.

The President also appointed the following as the Committee on Conservation of Sight and Prevention of Blindness: Dr. E. G. Gill, chairman, and Drs. W. W. Gill and A. A. Burke.

Floral Eponym

Lettsomia

LETTSOM, JOHN COAKLEY. 1774-1815

Lettsom was the well known Quaker physician and the founder of the Medical Society of London. He is well remembered as the friend of many American doctors who visited London during his time. When the Pennsylvania Hospital was started, he sent a set of handsome anatomical plates.

Lettsomia is a genus of about 40 species of scandent shrubs of tropical Africa and East India. L. capitata is a beautiful vine with deep pink flowers that may be grown in Southern Florida.

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MEDICAL SOCIETY OF VIRGINIA

PUBLIC RELATIONS

HENRY S. JOHNSON, *Director*

National Educational Campaign in Opposition to Compulsory Health Insurance.

A conference was called by the Coordinating Committee from the Board of Trustees of the American Medical Association in Chicago, February 12th.

Invitations were extended (expenses paid) to two representatives from each state medical society. Dr. John T. T. Hundley, Councilor, 6th District, Lynchburg, and Miss Agnes V. Edwards, Executive Secretary, were there.

This conference was unusually well attended and considered the campaign to defeat compulsory health insurance on the national, state and local levels. The Board of Trustees, the Coordinating Committee, the Public Relations firm of Whitaker and Baxter and these representatives spent the entire day in a discussion of this campaign.

The work of the firm of Whitaker and Baxter will be largely that of developing strategy, procedures and materials, rather than "lobbying in Washington". Emphasis was placed on the positive program of the medical profession as embodied in the 12-Point Program of the American Medical Association.

As an observer, one was impressed with several items: (1) With the proposals of Whitaker and Baxter; (2) The enthusiasm with which the entire program was accepted by the representation from the states; (3) The general agreement and accord reached by the delegation; (4) The recognition and acceptance of the leadership and assistance offered by the American Medical Association in this program, and (5) the obvious fine atmosphere of *esprit de corps* in which this campaign is being approached.

The following day representatives from approximately 25 states gathered for another conference on the subject of implementing this program on a state and local level.

For this, there was no set program, but instead, just "shop talk". The existing and possible setups in the representative states were discussed in detail. The merits of specific activities were debated and in general, this proved to be a highly instructive and helpful session. The minutes of this meeting were sent to the represented states.

It was felt that the conference called by AMA could be helpful to the representative campaign chairman and in the meantime, Dr. John T. T. Hundley of Lynchburg, has been chosen as the state campaign chairman of the Medical Society of Virginia.

Public Relations Committee Meeting.

A regular meeting of the Public Relations Committee was held at Ruegers Hotel, Thursday evening, March 3. It was attended by all members of the committee and Dr. M. Pierce Rucker and Dr. John T. T. Hundley of the 6th Congressional District, Lynchburg.

From a three-hour discussion, several points were considered of sufficient importance to be recommended to the regular meeting of the Council the following day. Some of these are as follows: (1) More frequent meetings than are normally scheduled by local societies. (2) At least one meeting of each local medical society during the current year to be devoted to a discussion of the Socio-Economic aspects of medicine with particular reference to compulsory health insurance. The advisability of having leadership of the lay-public in for these meetings was pointed out. (3) Set-up the necessary machinery to cooperate with the efforts of the membership of the Medical Society of Virginia, under the directorship of our state educational campaign chairman, in opposing compulsory health insurance. (4) To renew our efforts in a program of education of the individual membership of the society and engage his assistance in this campaign. (5) The creation of "grievance committees" (if these do not exist) to deal with complaints from patients of members of the Medical Society of Virginia.

Speaking Engagements and Speakers.

Following the pattern of the state-wide Public Relations Conference in Richmond, January 15, it is gratifying to observe how many local medical societies are inviting in representation from other professions, business and civic groups, on discussions of the Socio-Economic aspects of medicine. Appearances before other than medical groups are most desirable. Speaking engagements and discussions can be very effective in molding public opinion and opposing government medicine. It is, therefore, hoped that each medical society and each doctor will be on the alert for every such opportunity that may be uncovered and that the consensus of the group may be secured in the form of a resolution or request which may be passed on to Washington, American Medical Association, Whitaker and Baxter, and the press, etc., through the department of public relations.

Although, in the near future, there may be a specific request from the chairman of the educational campaign in this regard, this means is being employed to urge every member of the Medical Society of Virginia to be thinking over capable speakers, both in and outside of the profession, who would be willing to make the necessary preparation to serve in this capacity.

Already there is evidence of great support of the point of view of the medical profession with respect to any approach to socialism here. It is urgent that people of Virginia give intelligent consideration to the immediate and ultimate effects of compulsory health insurance,

and that these views be made known to our representation in Washington.

Another Danger.

It appears that the 81st Congress is now giving consideration to the broadening of the Social Security Act to include weekly payments in the event of disability. If cash weekly payments were included for disability, this would necessitate a great array of federal employees not necessarily well trained for this highly technical work as claims adjusters. This is but another evidence of attempts being made to socialize a service to the American people. It should be regarded as another step toward placing in the hands of the Social Security Administration, responsibility of administering a Medical Care Program. (See, HR 2892 and 2893.)

NATIONAL EDUCATION CAMPAIGN AMERICAN MEDICAL ASSOCIATION

TO THE DOCTORS OF VIRGINIA:

American Medicine faces its greatest crisis. The issue is clearly drawn. On one side is the medical profession, the practicing doctor, who is fighting to maintain his personal and professional integrity. Aligned against him are the forces of collectivism, of bureaucratic control, who desire to impose State controlled medicine on the American Medical profession and on the American people. Between the two is the public, generally uninformed, often gullible, who will be the real losers if the medical profession fails to win.

The battle is joined. The American Medical Association has accepted the challenge and is entering upon an all-out fight to inform the public of the dangers of State medicine and the advantages of the private system of medical practice. The AMA cannot win, but the doctors of America, with the help of their friends, can.

I have been appointed State Chairman for Virginia. It will be my task, working through the State and local medical societies, to direct the fight in Virginia. There is nothing I can do alone, but with the help of every Virginia doctor, and our lay friends, we can win this fight. And win it we must, or we will be slaves of a Washington bureaucracy.

In the next few months you will hear from me many times. I am confident I will not call in vain.

Mobilize your resources. Contact your friends. Work through your lay organizations. Send for material you can and will use. Speak before lay groups. Influence your patients.

In that way we will win; and win we must.

JOHN T. T. HUNDLEY, M.D.,
Chairman, State Educational Program
Allied Arts Building, Lynchburg, Va.

American Medical Association Assessment for Educational Campaign.

According to the list published in the March issue of the *Monthly,* there were 487 Virginia doctors who had contributed to the special assessment for the American Medical Association Educational Campaign. The following list of 536 contributors, which was closed on March 18th, brings the total number of contributions from Virginia to 1023.

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Dr. J. L. DeCormis

Albemarle
Dr. R. S. Blackman
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Dr. Frank D. Daniel
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Dr. John L. Guerrant
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Dr. Douglas D. Fear
Dr. E. F. Flora
Dr. Paul T. Forth
Dr. Newland W. Fountain
Dr. J. E. Gardner
Dr. David S. Garner
Dr. E. G. Gill
Dr. Earle Glendy
Dr. K. D. Graves
Dr. A. M. Groseclose
Dr. Fred E. Hamlin
Dr. W. G. Hardy
Dr. W. F. Hatcher
Dr. Frank Helvestine, Jr.
Dr. T. J. Hughes
Dr. T. J. Humphries
Dr. George S. Hurt
Dr. Ira H. Hurt
Dr. John Hurt
Dr. Charles Irvin
Dr. M. A. Johnson, Jr.
Dr. A. P. Jones
Dr. Reverdy H. Jones, Jr.
Dr. W. H. Kaufman
Dr. L. D. Keyser
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Dr. George S. Maxwell
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Dr. W. F. Mitchell
Dr. W. M. Moir
Dr. Jerome Natt
Dr. E. B. Neal
Dr. R. H. Newman
Dr. J. B. Nichols
Dr. C. D. Nofsinger
Dr. H. C. Padgett
Dr. C. H. Peterson
Dr. W. O. Porter
Dr. W. L. Powell
Dr. G. G. Rhudy
Dr. L. G. Richards
Dr. Duvahl B. Ridgway
Dr. Churchill Robertson
Dr. A. J. Russo
Dr. Wade Saunders
Dr. Robert J. Scott
Dr. E. W. Senter
Dr. B. P. Seward
Dr. William L. Sibley
Dr. Russell Smiley
Dr. Charles D. Smith
Dr. L. C. Spengler
Dr. A. Stone
Dr. Harry B. Stone
Dr. Harry B. Stone, Jr.
Dr. Wm. Conrad Stone

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Dr. Douglas B. Stratton
Dr. Frank Strickler
Dr. M. C. Tavenner
Dr. H. H. Trout
Dr. H. H. Trout, Jr.
Dr. Phil C. Trout
Dr. A. K. Turner
Dr. H. H. Wescott
Dr. W. R. Whitman
Dr. M. H. Williams
Dr. J. D. Willis
Dr. F. B. Wolfe
Dr. Charles Young
Dr. Charles Young, Jr.

Russell

Dr. E. P. Whited

Southwestern

Dr. R. D. Campbell
Dr. J. F. Chairsell
Dr. Garrett Dalton
Dr. W. P. Davis
Dr. W. Frederic Delp
Dr. Charles Duncan
Dr. J. J. Eller
Dr. H. D. Fitzpatrick
Dr. G. E. Godman
Dr. C. C. Hatfield
Dr. Mike Hines
Dr. Lloyd F. Hobbs
Dr. Rector S. LeGarde
Dr. J. C. Martin
Dr. Milton Millman
Dr. T. E. Painter
Dr. Richard C. Potter
Dr. P. D. Stout
Dr. D. D. Vance
Dr. T. H. Worrell

Tazewell

Dr. H. H. Ballard
Dr. R. E. Bower
Dr. R. Brittain
Dr. Harry L. Day
Dr. P. P. Ferraraccio
Dr. Tillou Henderson
Dr. W. C. Jackson
Dr. Mary E. Johnston
Dr. Frank A. McCue
Dr. Andrew D. Parson
Dr. H. A. Porter
Dr. James M. Peery
Dr. J. A. Robinson
Dr. John H. Sproles
Dr. A. M. Tiernan
Dr. G. D. Vermilya

Warwick

Dr. E. L. Alexander
Dr. Guy C. Amory
Dr. M. B. Beecroft
Dr. C. B. Courtney
Dr. A. A. Creecy
Dr. Murray Dick
Dr. Everett C. Eickhoff
Dr. Barnes Gillespie
Dr. Melvin L. Horne
Dr. E. B. Mewborne
Dr. Samuel H. Mirmelstein
Dr. G. Colbert Tyler
Dr. Stanley W. White
Dr. William H. Windley

Wise

Dr. E. J. Benko

Bibliotheca Obstetrica

Hippocrates (460-375): Opera: *Basileae, Andreas Cratanderus,* 1526, 494p. 32 cm. **(M.L.)**

The "Father of Medicine" was a poor obstetrician. What little of obstetrics that is found in his works is wrong. Not only that but many of these errors persisted for centuries and in some instances impeded the progress of the obstetrical art. He taught that lacerations of the perineum were to be avoided by softening the tissue with emollient and relaxing douches. If a laceration did occur no attempt was made to repair it. Puerperal fever was the result of suppression of the lochia. He did recognize that the disease could occur in epidemics. "Sneezing" the patient was used for retained placenta, a practice still used in the mountains of Virginia. He recommended intra uterine douches to remove bits of retained placenta. He taught that the pubic bones separated to permit the birth of the infant and that the fetus made his way through the genital passages by his own power. How a stillbirth was delivered he does not say. Perhaps there were no stillbirths in those times. The Hippocratic teaching, that a seven months fetus had a better chance of surviving than an eight months fetus, persisted until the time of Mariceau.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President—MRS. R. M. REYNOLDS, Norfolk
President-Elect—MRS. C. E. HOLDERBY, Hilton Village
Recording Secretary—MRS. T. S. CHALKLEY, Richmond
Corresponding Secretary—MRS. CHARLES LUPTON, Norfolk
Treasurer—MRS. REUBEN SIMMS, Richmond
Parliamentarian—MRS. H. W. ROGERS, Norfolk
Historian—MRS. M. H. HARRIS, West Point

National Meeting.

A few more months, and the members of the Woman's Auxiliary to the American Medical Association will be arriving in Atlantic City, New Jersey, for their annual convention, June 6th to 10th.

Have you made your reservations? If not, send your request *at once* to Dr. Robert A. Bradley, Chairman, Subcommittee on Hotels, 16 Central Pier, Atlantic City, New Jersey.

Danville-Pittsylvania.

The main project for the years 1949 and 1950 for the Auxiliary to the Danville-Pittsylvania Academy of Medicine is the raising of an $1,800.00 subscription to the Memorial Hospital enlargement fund to supply one of the reception rooms planned for the new nurses' wing. A benefit movie was sponsored at one of the local theatres and this proved to be quite a success. Rummage sales have been conducted and are planned for future dates. Almost seven hundred dollars had been raised at the time this report was sent in.

The auxiliary has also raised $200.00 which was used as a gift toward the education of a pre-medical student.

Under the able leadership of Mrs. John L. Jennings, president of this Auxiliary, interest, cooperation, activities and attendance among the membership has exceeded that of any year in the history of this organization. All widows of deceased physicians in the community are included in the membership.

At the opening meeting of the year, October 5, 1948, at which twenty-five members were present, Dr. Thomas Moran, Pathologist at Memorial Hospital, spoke on the Blood Bank at the hospital. His interesting talk traced step by step the mechanism involved in rendering this service.

On January 7th the Auxiliary had an attendance of twenty-eight members and seven guests. Mr. C. S. Wheatley, attorney at law, spoke on Socialized Medicine and gave a detailed picture of the Murray-Wagner-Dingell Bill to be presented at the 81st Congress. He also gave a detailed account of socialized medicine in England, France and Germany.

MRS. CARL W. WHITE,
Publicity Chairman

Arlington.

This Auxiliary held a joint meeting with the Arlington County Medical Society on February 17th. The guest speaker was Dr. Marjorie Shearon, editor and legislative counselor, who gave a very interesting and informative talk on the National Insurance Bill. She also stated her opposition to H. R. Bill 782 to be presented in Congress this year. Great interest was aroused and all members were advised to write their congressmen opposing this bill.

EILEEN B. GILLIGAN (MRS. JOHN H.)
Publicity Chairman

BOOK ANNOUNCEMENTS

Psychodynamics and the Allergic Patient. By HAROLD A. ABRAMSON, M.D., F.A.C.A., Associate Physician for Allergy, The Mount Sinai Hospital, New York; Consulting Physician for Allergy, Sea View Hospital, Staten Island; etc. With a Panel Discussion. The Bruce Publishing Company, Saint Paul and Minneapolis. 1948. An Official Publication of the American College of Allergists. ix-81 pages. Cloth.

The Old Virginia Gentleman and Other Sketches by GEORGE W. BAGBY. Edited and arranged by his daughter, Ellen M. Bagby. Richmond, Virginia; The Dietz Press, Inc. Price $3.50.

The first edition of Dr. Bagby's works appeared in 1884-85. Twenty-five years later, Thomas Nelson Page edited the second edition with an appraisal of Dr. Bagby's literary works. In 1938 the third edition appeared with an introduction by Douglas Southall Freeman. Since then a fourth edition has been exhausted. The present edition contains the preface of Thomas Nelson Page, the introduction by Douglas Southall Freeman and recollections of Dr. Bagby by Mrs. Kate Burwell Bowyer of Avenel. It was at Avenel that Dr. Bagby received his inspiration for "The Old Virginia Gentleman" a lecture that he delivered over

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the State in the interest of the Virginia Historical Society.

That so many editions have been necessary attests the growing literary stature of George W. Bagby. His stories of antebellum and reconstruction days in Virginia are masterpieces, and are especially timely in these days of world reconstruction. The format of the fifth edition is very attractive, more so than the former editions, and altogether it makes an important item of Virginiana, especially for the doctor.

Symptoms in Diagnosis. By JONATHAN CAMPBELL MEAKINS, C.B.E., M.D., D. Sc., LL.D., Formerly Professor of Medicine and Director of the Department of Medicine, McGill University; Formerly Physician-in-Chief, Royal Victoria Hospital, Montreal; Formerly Professor of Therapeutics and Clinical Medicine, University of Edinburg; etc. Second Edition. Baltimore, The Williams & Wilkins Company. 1948. xv-542 pages. Illustrated. Cloth. Price $7.50.

Lung Dust Lesions (Pneumoconiosis) versus Tuberculosis. By LEWIS GREGORY COLE, M.D., F.A.C.R., Former Professor of Roentgenology, Cornell Medical College, Past President of American Roentgen Ray Society, etc. White Plains, New York, American Medical Films, Inc., 1948. xxii-474 pages. Profusely illustrated. Cloth, Price $10.00.

The author states that his study of this subject covers a period of fourteen years of intensive work in collaboration with his son, the late William Gregory Cole, whose unfortunate death occurred before the publication of the present volume. Some reports of this study have already been published, including a preliminary report in 1940 under the John B. Pierce Foundation of which Dr. L. G. Cole was Director of Silicotic Research. Several articles have also appeared in special medical journals.

In the present volume, the cooperation of some seventy distinguished pathologists, roentgenologists, and others is acknowledged, these being widely scattered throughout the United States and Canada. They have contributed specimens and roentgenograms obtained from many different types of industries.

The author dislikes the use of the term silicosis to indicate dust lesions generally on the basis that silica dust is the usual offender. He prefers the term pneumoconiosis as the general term because so many varieties of dust are concerned and feels that only the lesions of silica dust should be termed silicosis.

He states that the problems encountered in the diagnosis of lung dust lesions concern the clinician, the roentgenologist, and the pathologist. The diagnosis rests largely upon the roentgenogram. Six different types of lesions are described, with varied pathology and roentgen findings, and he states that these types can be best identified on the roentgenogram if their individual pathologic change is understood. While his position in the field of roentgenology needs no comment, he is not classed as a pathologist. However, he has devoted a vast amount of time to the latter subject as is attested by his writings. Therefore, he is in a position to discuss the pathology along with the X-ray findings in a highly competent manner, and the book contains numerous photographic, photomicrographic, and roentgenographic illustrations. These are correlated and indicate the painstaking and excellent work which has been done on the subject.

While the whole study is primarily that of dust lesions, the fact that silicosis predisposes to a complicating tuberculous infection justifies a discussion of this latter disease in this relation. The picture is confused from the diagnostic standpoint on account of the similarity of the pathological processes in the two conditions and resultant confusing x-ray findings. Also, pure tuberculosis may sometimes simulate pneumoconiosis. Differential points are discussed at some length. Differentiation of other lung conditions is likewise discussed.

One of the aims of the study is to bring out certain information which may help to settle justly the economic and social aspects of dust lesions. For instance, some of the types described produce few or no symptoms while others are extremely dangerous to the patient, which makes identification of the particular type highly important.

Many other features are discussed which cannot be taken up here, but which contribute to the value of the work. Its simplicity of expression and clarity of description make for interesting reading. Reasons are given for any opinions not in conformation with accepted standards. It contains a wealth of information which should be valuable to anyone interested in the subject.

D. D. TALLEY, JR.

EDITORIAL

Why I Dislike Compulsory Health Insurance

THE health bills now before Congress present a vital issue to every man, woman and child in the United States. Once the federal government embarks on this enterprise there will be no turning back. It is a big personal question. For that reason I have discarded the editorial "we". I am discussing it not as an editor, nor as a Doctor of Medicine, but as a citizen.

In the first place I dislike *compulsion.* It was from such manmade compulsion that my forefathers fled Europe. It was for freedom from such compulsion that my fathers fought. It is for such freedom that I am willing to fight and die, if need be.

In the second place, the plan is too costly. Besides the present cost of medical care, there will be malingerers and hypochondriacs for which the plan has no checks. In fact, it actually encourages both with its cash bonuses for sickness and unemployment. Then there will be an army of clerks, filing clerks, inspectors, and administrators, variously estimated at from 300,000 to 500,000 who will have to be paid out of my (mine and yours) medical dollar. Every detail of my medical history will be a matter of public record. Had there been such a system in operation in Rotterdam in Erasmus' time, there would have been no argument as to whether he had congenital or acquired syphilis, as occurred sometime ago when his bones were moved to make room for an addition to a church. I can see the glee with which the modern bureaucrat would have unearthed this information concerning the great Tolerator of Rotterdam.

For three years there will be no benefits—only payroll deductions. The six billion dollars raised in this manner will be devoted to building health centers all over the country. After three years the plan will be put in operation and the payroll deductions will be hiked. Six per cent is the figure most frequently mentioned, but there is no limit set by law. The deficit (and all countries where the plan is in operation have deficits) will be met by general taxation. National medical care after ten years experience is costing New Zealand 46 per cent of its entire tax revenue.

In the third place I would get a poorer grade of medical care. S-5 like its predecessor, the Wagner-Murray-Dingell bill was written by the International Labor Organization and conforms to the same international pattern. The bill provides that rules and regulations be written by the Administrator of the Social Security Agency with the advice of five members of the National Health Insurance Board. This means that the American people will be signing a blank check if this bill passes. It is only by knowing what is in the minds of the Administrator of the Social Security Agency and the I. L. O. that we can form any idea of what we are getting into. What has happened in other countries that have I. L. O. laws ought to be a warning to us.

Under the leadership of Bismarck, Germany was the first country to adopt socialized medicine. In fact Germany was the model for the I. L. O. Not only was it the cause of Germany losing its unquestioned preeminence in medicine but in no other place in the history of the world have medical men committed such crimes against humanity as were done by Germans in World War II.

In Great Britain medicine was nationalized on July 5, 1948, and already obstetric and dental anesthesia and hormone treatment have been proscribed as being unnecessary. Much time and money are devoted to fitting teeth, eye glasses and wigs.

For the past thirty years America has led the world in the quality and quantity of medical care its people have received under free enterprise system. Why experiment, especially in view of how the experiments in other countries have turned out?

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In the fourth place, it will place in the hands of a political appointee, the Director of the Federal Security Agency, the expenditure of the vast sum of over 20 billion dollars annually with no checks whatever. Already the employees of this agency have spent nearly a million dollars for propaganda. Already a Congressional Committee has called attention to the illegality of such action. In 1947, the F. B. I. investigated these irregularities and made its report to the Attorney-General, and there the matter lies. These bills, if they pass the Congress, will be a long step towards the Police State. Our health, education and welfare will be in the hands of a man who arbitrarily makes his own rules regardless of the laws passed by Congress.

A New Approach to Getting a Doctor for Rural Areas

IN many ways the dearth of doctors in country districts is like the weather. Everyone talks about it but no one does anything about its correction. In at least one county in Arkansas the Methodist Church has undertaken to remedy the situation in a practical manner. We have the following notice from The Board of Missions and Church Extension of the Methodist Church:

"The Methodist Church is looking for a physician to settle and serve Newton County, rural northwestern Arkansas, where 10,000 are without a doctor or nurse, and the nearest hospital is twenty-five miles from Jasper, the county seat.

"Five years ago the Methodist Church organized the 'Newton County Larger Parish', built a stone church in Jasper, and now has two experienced pastors carrying on a program of evangelism, religious education, and community service. The ministers cooperate with the agricultural agent and others in economic betterment, have a farmer's cooperative, etc.

"If a doctor can be found for the community, the Methodist Church will organize community support for the erection of a clinic, with a laboratory and a few beds, and will subsidize the establishment until the practice is built-up. The doctor will reside in Jasper, will be related to public health and school health, and the state will probably supply a nurse.

"For further information, write to Dr. M. O. Williams, Board of Missions and Church Extension, 150 Fifth Avenue, New York 11, N. Y."

In Biblical times, God, in His Infinite Wisdom, directed Moses to make the observance of wise sanitary laws by the Israelites a part of their religion. It may be that the church still has a part to play in the nation's health. A medical missionary can be as useful in some of the rural sections of the United States as he can in the foreign field. Now that large areas of China are closed to missions, some of the foreign missionaries might be diverted to the home mission fields.

Chickahominy Fever

NOT only has modern medicine conquered pestilential fevers, but it has greatly simplified their terminology. Older practitioners can remember when their elders discoursed learnedly on typho-malarial fever. Jail fever was mentioned as some sort of disease nice people did not have. But the previous generation had to contend with the confused nomenclature based entirely on clinical signs and symptoms. At the beginning of the Civil War the following terms were allowed in official Army reports: typhus, typhoid, common continued fevers, remittent fever, quotidian, tertian,

quartan and congestive intermittent fevers, bilious remittent fever, etc. In the Peninsular Campaign this list proved inadequate and a Special Board of Army Surgeons was appointed to review the situation. The Board examined the fever in several of the division hospitals of the Army of the Potomac and came to the conclusion that while a certain number of cases of ordinary typhoid existed in the Army, the large majority of the febrile cases "were bilious remittent fevers which, not having been controlled in their primary stage, had assumed that adynamic type which is present in enteric fever. This officially pronounced adynamic remittent [fever] prevailed extensively during the Peninsular Campaign of the following year and was familiarly known as *Chickahominy fever.*" The outstanding features according to Dr. J. M. DaCosta were extreme emaciation, diarrhoea that persisted for months, and great flatulence. There was no anasarca. He said the facies were characteristic but he did not describe it other than to say that the eye was clear. He reported the autopsy findings in two cases. Both had patchy inflammation in the ileum and the colon. One case had small ulcers in the sigmoid and the rectum. Both showed solitary glands containing black matter. One case had an enlarged fatty liver. Whether this were a severe form of typhoid fever he did not undertake to answer.

SOCIETIES

The Bedford County Medical Society,

At its January 21st meeting, elected the following officers for the ensuing year: President, Dr. Clifton R. Titus; vice-president, Dr. J. G. Jantz; and re-elected Dr. William V. Rucker secretary-treasurer. All are of Bedford.

Princess Anne County Medical Society.

Officers of this Society for the current year are: President, Dr. Ira L. Hancock of Creeds and secretary, Dr. Harry B. LaFavre of Virginia Beach.

Roanoke Academy of Medicine.

The guest speaker at the March 7 meeting of the Academy was Dr. Lawrence Reynolds, Detroit, Michigan, president of the American Roentgen Ray Society, whose subject was advances in the Medical Application of Atomic Energy. Preceding his talk, Dr. M. Pierce Rucker, president of the Medical Society of Virginia, spoke briefly. Dr. John T. T. Hundley, Lynchburg, recently appointed Virginia chairman for the National Education Campaign also attended and the Academy is working with him actively in public relations work.

Dr. Charles H. Peterson and Dr. T. J. Humphries are president and secretary, respectively, of the Academy.

The Augusta County Medical Society

Met at the Garden Center in Staunton on February 2nd, with the president, Dr. Charles L. Savage of Waynesboro, presiding, and Dr. C. F. Gaylord of Staunton at the secretary's desk. Dr. C. J. Frankel, associate professor of orthopedics at the University of Virginia, delivered an excellent paper on Low Backache, Its Diagnosis and Treatment. Dr. J. T. T. Hundley of Lynchburg spoke on The Crisis That Faces the Medical Profession at This Time.

The Washington County Medical Society

Was reorganized on January 13th, and the following physicians of Washington County attended the organizational meeting: Drs. Hines, Yokeley, Le Garde, Catherine Smith, Suter, Hillman, J. A. Wolfe, Fitzgerald, Johnston, Gabriel, and Hayter.

At the insistence of many physicians, letters were sent to all physicians as to their desire of reorganizing the Washington County Medical Society. Nineteen out of 21 replies were in the affirmative.

At the organizational meeting the constitution and by-laws as suggested by the American Medical Association were adopted. It was decided that no charter would be requested so that Washington County would still be included as a component of the Southwestern Virginia Medical Society.

An election of officers was held with the following results: Dr. R. S. LeGarde, Damascus, president; Dr. C. F. Johnston, Abingdon, vice-presi-

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dent; Dr. James M. Suter, Bristol, secretary-treasurer; *Board of Censors*: Drs. P. S. Smith, G. Hunter Wolfe, and S. H. Yokeley; *Committee of Programs and Scientific Work*: Drs. C. F. Johnston, Mike Hines and James M. Suter; *Committee of Public Health and Legislation*: Drs. G. Hunter Wolfe, R. L. Hillman, and James M. Suter.

The second meeting of the Washington County Medical Society was held at the Martha Washington Inn on February 10. At this meeting it was decided that the Society would meet each month on the third Thursday at 6:30 p.m. Dr. C. J. Harkrader was guest speaker, his subject being "Chest Injuries".

JAMES M. SUTER,
Secretary-Treasurer

Lynchburg Academy of Medicine.

Dr. Andrew D. Hart of the University of Virginia Medical School was guest speaker before the Academy at its meeting on February 14, his subject being Psychosomatic Concepts of Disease. Dr. William T. Pugh is president of the Academy and Dr. John T. T. Hundley secretary.

NEWS

The Tri-State Medical Association

Of the Carolinas and Virginia held its semi-centennial meeting in Williamsburg on February 21st and 22nd, under the presidency of Dr. C. N. Wyatt, Greenville, S. C. Approximately 125 members attended the sessions. Dr. Russell Buxton, Newport News, succeeded to the presidency; Dr. R. B. Davis, Greensboro, N. C., is president-elect; Drs. J. E. Barrett, Williamsburg, W. T. Harris, Troy, N. C., and Furman Wallace, Spartanburg, S. C., vice-presidents; and Dr. J. M. Northington, Charlotte, N. C., re-elected secretary-treasurer. Members of the Council for the current year include Drs. Northington and Grady Dixon, Ayden, N. C., J. W. Devine, Jr., Lynchburg, W. R. Wallace, Chester, S. C., W. A. Johns, Richmond, R. E. Brooks, Burlington, N. C., R. L. Crawford, Lancaster, S. C., Rex Blankinship, Richmond, C. M. Gilmore, Greensboro, N. C., and F. E. Kredel, Charleston, S. C.

The Southwestern Virginia Medical Society

Will hold its semi-annual meeting at Hotel Roanoke, Roanoke, on May 26, under the presidency of Dr. R. M. Dehart of Radford. Dr. Andrew F. Giesen, also of Radford, is secretary. At the afternoon session, starting at 2:00 p.m., the speakers will be Dr. James M. Suter of Abingdon on The Need for Continued Treatment and Control of Venereal Disease in Southwestern Virginia; Dr. William H. Kaufman of Roanoke on "Geriatric Dermatoses; and Dr. Jay M. Arena of Durham, N.C., on Acute Poisoning in Children. This will be followed by a short business session and a social hour from 5:00 to 6:00 p.m. Following a banquet at 7:00 p.m., there will be addresses by Dr. Robert N. Creadick of Duke University on Psychomatic Gynecology, and by Dr. William N. Nicholson, also of Duke, on Some Neurologic and Vascular Complications of Diabetes Mellitus.

Miller Portrait Presented to Academy.

The family of Dr. Joseph L. Miller of Thomas, West Virginia, presented his portrait to the Richmond Academy of Medicine on March 12th. The ceremony was held in the Miller Library of the Academy, which houses a collection of rare medical books, portraits, prints, autographed letters, silhouettes and medical instruments, presented by Dr. Miller in 1932. The portrait, which was painted by David Silvette, was unveiled by Mrs. Henderson H. Miller of New York. It was presented by Dr. James H. Smith and accepted by Dr. Wyndham B. Blanton. Dr. Harry Warthen, president of the Academy, presided at the ceremony.

Dr. Miller graduated from the Medical College of Virginia in 1900 and received the honorary doctorate of literature from that institution in 1931. He has been made a life member of the Historical Society of Virginia and an honorary member of the Richmond Academy of Medicine.

News from School of Medicine, University of Virginia.

Under the auspices of the Postgraduate Program for House Officers, the following guest speakers have recently presented lectures to the faculty and student body:

February 21—Dr. Helen B. Taussig, Johns Hopkins. Subject: "Differential Diagnosis of Congenital Cardiac Malformations of the Cyanotic Type."

February 28—Dr. Homer W. Smith, New York University College of Medicine. Subject: "Clinical Implications of Disturbed Renal Function."

March 7—Dr. Russel L. Haden, formerly Chief of Medicine, Cleveland Clinic. Subject: "Leukemia."

March 14—Dr. Harry L. Alexander, Washington University, St. Louis. Subject: "The Broader Aspects of Allergy."

Dr. A. D. Hart, Associate Professor of Medicine, addressed members of the Lynchburg Academy of Medicine, Inc., on the subject, "Psychosomatic Concepts of Disease", at a meeting on February 15th.

At the meeting of the Virginia Council on Health and Medical Care in Richmond, January 29th, Dr. H. B. Mulholland, Professor of Medicine, was re-elected Chairman of the Council.

On February 18th, Dr. C. B. Oberndorf, Clinical Professor of Psychology, Columbia University, spoke to the faculty and student body on the subject, "Basis of Psychoanalytic Therapy".

Dr. E. P. Lehman, Professor of Surgery, delivered the first Major G. Seelig Lecture at the Washington University School of Medicine on February 18. Dr. Lehman's subject was "The Reaction of the Peritoneum".

At the Annual Meeting of the Georgia Society of Ophthalmology and Otolaryngology, held in Savannah, March 4th and 5th, Dr. Fletcher D. Woodward presented lectures on "Paralysis of the Larynx" and "Problems in Laryngology".

Dr. Chalmers L. Gemmill, Professor of Pharmacology, presented a paper entitled "Glycolysis in Pharmacology" at the Army Chemical Center on March 9.

Dr. H. B. Mulholland attended the Second Annual Rural Health Conference in Chapel Hill, N. C., on March 11th, and spoke to the group on the subject "The Problems of Rural Medicine".

Sterling-Winthrop Research Institute

Will start moving into its new $3,000,000 laboratory building in June of this year, but formal opening will be held later in the year.

The four-story, steel-frame brick building is located on a knoll on the east bank of the Hudson River, overlooking the plants at Rensselaer.

A division of Sterling Drug Inc., the Institute conducts research for all operating Sterling divisions and subsidiaries which have a total of 51 plants and 118 branches throughout the world. The new laboratory building has been described as "the scientific brain of the Sterling organization."

The American Congress of Physical Medicine

Will hold its twenty-seventh annual scientific and clinical session September 6-10 inclusive, at the Netherland Plaza Hotel, Cincinnati, Ohio. Scientific and clinical sessions will be given each day and all sessions will be open to members of the medical profession in good standing with the American Medical Association. In addition to the scientific sessions, the annual instruction courses will be offered in two groups. One set of ten lectures will consist of basic subjects and attendance will be limited to physicians. One set of ten lectures will be more general in character and will be open to physicians as well as to physical therapy technicians who are registered with the American Registry of Physical Therapy Technicians.

Full information may be obtained by writing the American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2, Illinois.

The American College of Allergists.

More than 1000 physicians interested in allergy from North America and abroad are expected in Chicago from April 14 to April 17. Everyone who attends is urged to bring his wife and any office personnel interested in the various phases of allergy. Both members and non-members are urged to attend and are required to register and receive a badge. There will be no charge for registration. There will be over 20 scientific exhibits and 40 technical exhibits of interest to allergists.

All those attending the annual meeting are requested to make their own hotel reservations directly with the Palmer House. A block of rooms has been reserved for those attending the meeting. Please direct all correspondence to the Reservation Manager, Palmer House, Chicago 90, Illinois and include your arrival and departure time, and the type and rate of room desired. Be sure to indicate

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that you are attending the meeting of the American College of Allergists.

Personnel Notes, State Department of Health.

Effective March 1, Dr. W. D. Anderson assumed his duties as Health Officer of the Russell-Wise Health District, with headquarters at Norton.

Dr. E. D. Hardin, until recently Pittsylvania County health officer, has been appointed to the same position for Page, Warren and Shenandoah Counties, and has just entered upon his new duties with headquarters at Luray.

Dr. H. C. McCoy,

Gordonsville, was elected vice-president of the Business Men's Association of that place, at the annual meeting in March.

Virginia State Board of Medical Examiners.

The regular meeting of the Virginia State Board of Medical Examiners will be held at the Richmond Hotel, Richmond, on June 16th, 1949, and the examination on Part I and Part II will be held at the same Hotel June 17th and 18th.

All papers relative to the application for examination and for license by reciprocity must be filed with the Board not less than ten days before the date of meeting.

Address all correspondence on these subjects to Dr. K. D. Graves, 631 First Street S. W., Roanoke, Virginia.

Dr. and Mrs. C. V. Montgomery,

South Hill, have been spending the winter at Daytona Beach, Florida, having gone there the first of December.

Richmond Doctor Receives Grant from Markle Foundation.

Dr. G. Watson James, III, Richmond, has been appointed by the John and Mary R. Markle Foundation as one of the thirteen "Scholars in Medical Science" to receive a $25,000 grant, at the rate of $5,000 a year for five years, to the Medical College of Virginia, in which institution he is at present a research fellow in medicine. These grants are made in response to the public demand for more and better doctors in rural areas, public health and other fields. To meet this demand it is necessary to keep qualified young scientists on the staffs of medical schools by giving them financial support.

Dr. James graduated from the Medical College in December 1943 and was in military service from June 1946 to April 1948, during which time he was engaged in clinical investigation.

Sections of A. M. A. Directory Set in Type.

Most of the medical laws, hospital data and preliminary state matter for the new 18th edition of the American Medical Directory has now been set in type.

Frank Cargill, head of the A. M. A. Directory Department, reports that because of the vast number of changes of address, the new names to be added and the lack of trained clerical help, compilation of the big book has been progressing very slowly.

The Directory will contain biographical information on approximately 220,000 physicians, including more than 50,000 doctors whose names have entered A. M. A. files since publication of the last Directory in 1942. One of the big problems in compiling the new edition is obtaining accurate addresses for physicians whose internships or residencies have just expired.

So far, copy on physicians in 15 states has been sent to an outside printing firm. Mr. Cargill says that it is almost impossible to predict at this time when the yearbook would be ready for delivery to subscribers. This marks the first time that the Directory is being printed outside of the A. M. A. headquarters building since the book was established in 1906.

The Southeastern Surgical Congress

Will hold its seventeenth annual assembly in Biloxi, Mississippi, at The Buena Vista Hotel, May 23-26, 1949.

There will be forty-three papers presented by distinguished surgeons from the South and throughout the country. Further information may be obtained from Dr. B. T. Beasley, secretary-treasurer, 701 Hurst Building, Atlanta 3, Georgia.

Color Television at A. M. A. Convention.

Television in natural color for the teaching of surgery and medicine to medical students will have a pioneering demonstration at the A. M. A. meeting in Atlantic City, under arrangements concluded by Smith Kline & French Laboratories, Philadelphia pharmaceutical house, and the University of Pennsylvania.

To assure the suitability of the equipment for

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widespread use in medical schools under general teaching conditions the Medical School of the University of Pennsylvania is collaborating with the Engineering Research Laboratories of the Columbia Broadcasting System in its design. Cooperating with CBS in the production of the equipment are Zenith Radio Corporation and Webster-Chicago Corporation.

Continuously for four days of the A. M. A. session, actual surgery and diagnostic and other medical procedures will be televised in natural color while being performed by the faculty of the Medical School of the University of Pennsylvania and by the staff of the Atlantic City Hospital. The color television picture will be picked up at the Atlantic City Hospital and beamed on a closed circuit directly to Convention Hall for the benefit of several thousand visiting physicians. The doctors will watch the transmissions on 20 color television receivers.

Doctors Urged to Mail Editorials.

Doctors throughout the country are requested to send to the A. M. A. all newspaper editorials pertaining to compulsory sickness insurance. Mail them any clippings pertaining to socialized medicine, whether pro or con, or dealing in any way with the A. M. A. or its 12-point health program.

The American Board of Preventive Medicine and Public Health, Incorporated,

Was approved by the Advisory Board for Medical Specialties and by the Council on Medical Education and Hospitals of the American Medical Association at their meeting on February 6. The American Board of Preventive Medicine and Public Health, Incorporated, therefore is prepared to accept applications for examination for certification in this specialty.

The requirements for certification include general qualifications, such as moral and ethical standing in the profession, adequate training in medicine and interneship in an approved hospital, and licensure to practice medicine in the United States. Eligibility for examination also requires that the applicant have special training and experience in preventive medicine and public health of at least six years following interneship. This must include special academic training, or its equivalent, and field training or residency meeting the standards set up by the Board.

Applications may also be received for the Founders Group who may be excused from examination. The By-laws authorize a Founders Group made up of practitioners of preventive medicine and public health who have attained unquestioned eminence in the field. The Founders Group presumably will include persons having attained eminence as indicated by academic appointments at the level of professor or associate professor of preventive medicine and public health, or who have held positions of eminence and responsibility for a period of not less than ten years in this field.

Dr. Ernest L. Stebbins of the Johns Hopkins University School of Hygiene and Public Health, Baltimore, is secretary-treasurer of the Board.

The Jefferson Medical College

Announces the institution of courses in the Basic Medical Sciences leading to the degrees of Master of Science and Doctor of Philosophy.

The courses offered are in the major fields of Anatomy, Physiology, Biochemistry, Bacteriology and Immunology, Pharmacology and Toxicology, and Pathology. The baccalaureate degree is a necessary requisite for admission to all courses except Pathology, which requires the degree of Doctor of Medicine. These courses will be open beginning September, 1949.

Dr. C. Marshall Lee, Jr.,

Formerly of Charlottesville and a member of the class of '35, University of Virginia, Department of Medicine, has located in Cincinnati, Ohio, where he has accepted a position as assistant professor of surgery in the College of Medicine of the University there. For the past two years he has been on the staff of Norburn Hospital, Asheville, N. C.

Dr. Vincent E. Lascara,

Class of '34, Medical College of Virginia, has located for practice in Newport News, with offices at 2407 Chestnut Avenue. Dr. Lascara was for a time on the staff of Central State Hospital, Petersburg, and later with the State Hospital in Raleigh, North Carolina.

Dr. Oscar R. Yates,

Suffolk, was recently presented the annual Silver Beaver Award by the Old Dominion Area Council of Boy Scouts. He has served as chairman of the Council health and safety committee and been interested in the scouting work for twenty years.

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The American Association of Railway Surgeons

Will hold its annual meeting at the Drake Hotel, Chicago, June 30, July 1 and 2. An interesting and instructive scientific program has been arranged. The morning sessions will include papers on various medical and surgical subjects, and the two afternoon sessions will be devoted to symposia on "Lesions of the Bones and Joints" and "Intra-thoracic Disorders."

The annual dinner will be held at the Drake Hotel on Friday evening, July 1. Room reservations may be made at the Drake Hotel or at the nearby Knickerbocker Hotel. There will be a technical exhibit in conjunction with the scientific meetings.

Further information may be obtained from the secretary, Dr. Chester C. Guy, 5800 Stony Island Avenue, Chicago 37.

Physician-Artists, Attention:

If you plan to exhibit at the Atlantic City Exhibition (American Medical Association, June 6-10, 1949)—Now is the time to write for entry blanks, rules, shipping labels, etc.

Haste is necessary because your entries must reach Atlantic City between April 15 and May 9.

For details, please write airmail to Francis H. Redewill, M.D., Secretary, American Physicians Art Association, Flood Building, San Francisco, California.

The Medical Library Association

Has chosen Mrs. Eileen R. Cunningham, librarian of Vanderbilt University School of Medicine, as first recipient of the Association's Marcia C. Noyes Award. This will be presented to her at the Association's annual meeting in Galveston, Texas, April 11, in recognition of outstanding achievements in medical librarianship.

The American College of Chest Physicians

Will hold its annual meeting at the Ambassador Hotel, Atlantic City, June 2-5. An interesting scientific program has been arranged, and speakers from several other countries are scheduled to appear.

The Board of Examiners of the College announces that the next oral and written examinations for fellowship will be held in Atlantic City, June 2. Candidates for fellowship in the College, who would like to take the examinations, should contact the Executive Secretary, American College of Chest Physicians, 500 North Dearborn Street, Chicago 10, Illinois.

The South Atlantic Association of Obstetricians and Gynecologists

Announces the establishment of "The Foundation Prize". Authors of papers on obstetrical or gynecological subjects desiring to compete for the prize may obtain information from Dr. E. D. Colvin, Secretary-Treasurer, 1259 Clifton Road, N. E., Atlanta, Ga.

The American Society of Medical Technologists

Will hold its 17th annual convention in Roanoke on June 19th, under the chairmanship of Miss Ida L. Reilly of that city. Miss Rachel M. Lehman, Indianapolis, is president of the Society and Miss Reilly is president-elect.

The Virginia Society of Medical Technologists is to have its annual convention in Charlottesville, May 7th and 8th. Miss Harriet Howe, Richmond, is president, and Miss Eleanor Rawls, Norfolk, vice-president.

New Books.

Among recently acquired books received at the Library of the Medical College of Virginia are the following, which are available to our readers under usual library rules:

Albright and Reifenstein—Parathyroid glands.
National Cottonseed Products Association—Allergy to cottonseed and other oils.
Bernheim—The story of Johns Hopkins.
Bohler—Medullary nailing of Kuntscher.
Bosco—La localizacion elective del infarto del Micardio en el Ventriculo Ixquierdo. Sus syndromes.
Bourdelle—Anatomie regionale des animaux comestiques.
Chilean Nitrate Educational Bureau—Bibliography of the literature on the minor elements and their relation to plant and animal nutrition.
Dunham—Premature infants; a manual for physicians.
Gold, ed.—Cornell conference on therapy. Vol. 3.
Gross—Modern foot therapy.
Hess—Die funktionelle organisation des vegetativen nervensystem.
Kagan—Fielding N. Garrison, a biography.
Knisely—Selective phagocytosis I.
Law—Therapy through interview.
Rice—The structure of matter.
Sulzburger and Baer—Office immunology.
Thorner—Psychiatry in general practice.
Traquair—Clinical ophthalmology for the general practioner.

Recent progress in hormone research. Vol. 3.
Vaughan—Practice of allergy. 2d ed.
Yearbook of urology. 1948.

Doctor,

In looking over the MONTHLY, don't forget the advertising pages, and remember all ads are carefully screened—the items, services, and messages presented are committee-accepted. Our standards are of the highest. The advertisers like our journal—that's why they selected it for use in their promotional program. They seek your patronage and your response encourages continued use of our publication.

In turn, the advertisers' patronage helps us to produce a journal that is second to none in our state. When you send inquiries, tell them that you read their advertisement in the VIRGINIA MEDICAL MONTHLY.

Doctor Wanted.

Doctor wanted to take over well-equipped, eight-room doctor's office, with well established practice in eastern North Carolina town of 3,000 population. Modern hospital 18 miles distant on Route 301 South. If interested, write Harrison Drug Company, Enfield, North Carolina. (*Adv.*)

Wanted—

Physician to share office and expenses. Office available 9:00 a.m. to 12:30 p.m. Central West End Office Building in Richmond. Answer "D. L.", care VIRGINIA MEDICAL MONTHLY, 1200 East Clay Street, Richmond. (*Adv.*)

For Rent—

Desirable office, centrally located in Richmond. Reasonable. If interested, dial 5-3267, or address "Office", care this journal, 1200 East Clay Street, Richmond 19. (*Adv.*)

OBITUARIES

Dr. Isaac Carrington Harrison,

Of Danville, President of the Medical Society of Virginia in 1931-1932, died on March the 12th of pneumonia, though he had been in bad health for about four years and had recently fractured his hip. He was born in Amelia County in December 1870 and studied medicine at the University of Virginia from which he received his diploma in 1895. He practiced in Clarksville for about twelve years, before locating in Danville in 1910. Dr. Harrison took an active part in the civic as well as professional life of Danville. He was one of the organizers of Hilltop Sanatorium and Memorial Hospital, was for ten years a member of the city School Board, and was identified with other local interests. He was for twenty-four years a member of the State Board of Medical Examiners. He is survived by his wife, two daughters and three sons, two of whom are physicians.

Dr. Charles O. Dearmont,

A former member of the Council, of the Medical Society of Virginia, died at his home at White Post on February 23. He was seventy years of age and had been a lifelong resident of Clarke County. He received his medical degree from the former University College of Medicine, Richmond, in 1903, returning to his home to practice. He had been a member of the Medical Society of Virginia for forty-five years, was a member of local medical societies and of the American Medical Association. He served for several years as chairman of the County School Board, was a member of Clarke County Lions Club, and a vestryman in the local Episcopal church, being senior warden at the time of his death. His wife, two brothers and a sister survive him.

RESOLUTION

Be it, and it is hereby Resolved by the Medical Staff, Winchester Memorial Hospital, Winchester, Virginia, meeting in regular monthly session this second day of March, 1949, that:

(1) The sudden death of Dr. Charles O. Dearmont on Wednesday, February 23, 1949, is regarded by the members of this Staff to represent a most serious loss not only to the Hospital, the development of which he so conscientiously fostered, but also to our own profession, which he so valiantly upheld, and a loss to the entire community wherein he lived, a loss to his church, in which he took such active part, and one to his many warm friends, admirers, and professional associates and acquaintances;

(2) This Staff held Dr. Charles O. Dearmont in the highest esteem, and recognized his virtues of gentle kindness, sobriety, tolerance, fair dealing, sterling character, and gentlemanly conduct;

(3) The deepest sympathy of this Staff, individually and collectively, is hereby extended to the widow of our deceased friend and associate, who with us mourns his loss;

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(4) This Resolution be spread upon the Minutes of this Meeting, and thereby be made a permanent record in memorium to the said Dr. Charles O. Dearmont, and copies of this Resolution be sent to the widow of Dr. Dearmont.

E. WILLIS LACY, JR.,
Secretary, Medical Staff,
Winchester Memorial Hospital.

Similar resolutions were also adopted at this meeting on the death of Dr. Philip Williams Boyd, whose death was announced in the March issue of the MONTHLY.

Dr. Lucius Daniel Morgan,

Widely known physician in Campbell and Bedford Counties, died at his home at Gladys on March 10 at the age of seventy-eight years. He was graduated in medicine from the former University College of Medicine, Richmond, in 1903 and, with the exception of a few years in Alleghany County, had practiced in the vicinity of Gladys for over forty years. He was a Mason, a member of the Medical Society of Virginia and the American Medical Association, and had been superintendent of the Kedron Baptist Sunday School at Gladys for more than forty years, a position he held at the time of his death. He is survived by his wife, one son, Dr. T. Addison Morgan of Franklin, three daughters, and a large family connection.

Memorial to Dr. J. A. Rucker.

The Bedford County Medical Society, of which Dr. Joseph A. Rucker was a popular and honored member, wishes to place on record this memorial as an expression of esteem and a tribute of respect to his memory:

WHEREAS, Dr. Rucker, who has been a beloved colaborer in the science of healing in Bedford County, and whereas our association, both professional and social, has been close and harmonious, we, the members of the Bedford County Medical Society, recognize the high order of his services and the fineness of his character, and offer the following resolutions:

BE IT HEREWITH RESOLVED, that in his death on June 29, 1948, Bedford County has suffered a serious loss. A general practitioner of the highest order, whose accomplishments were many and great. One truly a family physician, whose skill and ability were unquestioned and who, during his many years of active service to his patients, gave unstintingly of his time to rich and poor alike. No distance too great, no night too dark or stormy to stay his effort.

The qualities of heart, firmness of purpose, beauty of soul and the other attributes of a Christian gentleman endeared him to those who knew him, the better knowledge bringing the deeper love and appreciation.

That a copy of these resolutions be spread on the minutes of this meeting.

That a copy be sent to his family and to the VIRGINIA MEDICAL MONTHLY.

C. R. TITUS, *President.*

An Appreciation of Dr. Rufus S. Kight.

Dr. Rufus Speed Kight, an active member of this society for more than forty-five years and a former president, died at DePaul Hospital, this city, on February 12, 1949, in the seventy-second year of his life.

Dr. Kight's many professional accomplishments and his personal characteristics won for him a high place of prominence in the affairs of this society.

His medical career was characterized by the attainment of special skill in the field of obstetrics and gynecology. This was acquired more through his own study and effort than through teaching and exemplifies the ideal of rendering mankind a more efficient service through opportunity.

The personal traits of Dr. Kight endeared him to patients and colleagues alike. Although a man of retiring demeanor, he sought and retained the friendship of his associates in a most devoted way. Through all the years of his life, he exhibited the special virtues of loyalty to his friends, loyalty to the high ideals of his profession and loyalty to his duty.

In the passing of Dr. Kight, this society has lost a member of steadying influence and wise counsel and its members have lost a beloved friend.

It is requested that this humble tribute to our friend and fellow member be recorded in the minutes of this meeting of the Norfolk County Medical Society and that copies be sent to his family and the VIRGINIA MEDICAL MONTHLY for publication.

M. N. KING
C. L. HARRELL
M. S. FITCHETT, *Chairman*

Dr. J. David Buchanan,

Retired physician of Marion, died February 27, at the age of eighty-three. He graduated in medicine from Bellevue Hospital Medical College in 1892, and had been active in the professional and political life of Marion. He was formerly on the staff of Southwestern State Hospital, and for twenty years chairman of Smyth County Democratic Committee.

Dr. Erwin Carter Brandon,

Former medical examiner for the Norfolk and Western Railway, died on March 4 at his home in Bedford, in which place he located upon retirement from active duty. He formerly lived in Suffolk. He was a graduate of Vanderbilt University in 1909 and served in the Army Medical Corps during World War I. His wife and three children survive him.